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# The Production and Marketing of New York Market Peas

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A THESIS

PRESENTED TO THE FACULTY OF THE GRADUATE SCHOOL
OF CORNELL UNIVERSITY FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY

BY
DILWORTH WALKER

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# The Production and Marketing of New York Market Peas

Dilworth Walker

EFFICIENT WAY OF PUTTING MARKET PEAS IN BUSHEL BASKETS READY FOR SHIPMENT

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# THE PRODUCTION AND MARKETING OF NEW YORK MARKET PEAS[1]

DILWORTH WALKER

The production of green peas for market is a very speculative farm enterprise.[2] The peas must be picked at a particular time, shipped long distances, and sold and handled several times, and yet must satisfy a discriminating consumer demand for attractive-looking fresh vegetables. Peas are also a relatively expensive food and the demand is to some extent seasonal. The price is extremely sensitive to variations in quality and supply. Many losses might be avoided by a better understanding of the market situation. A knowledge of the costs of growing and marketing peas might also aid individuals to increase their profits. Likewise, reducing losses, lowering costs of production, or improving the methods of handling, would result in better peas at a lower cost to the consumer.

## METHOD OF INVESTIGATION

In making this study, general information about the crop was assembled from various sources. One hundred and twenty detailed enterprise-cost records were taken from New York pea growers, sixty-three in Erie County and fifty-seven in Madison and Chenango Counties. The survey method was used.

Costs of marketing were obtained from the records of three cooperative marketing associations, one local shipper, and six large commission firms in New York City. Data on shipments, prices, and methods of marketing also were supplied by these agencies.

Car-lot receipts of green peas in New York City were furnished by W. H. Stanton, of the New York office of the United States Bureau of Agricultural Economics.

Wholesale prices were obtained from the *Producers' Price Current.*

## PRODUCTION OF GREEN PEAS FOR MARKET

### AREAS, ACREAGE, AND PRODUCTION

Green peas for market and peas for the canning factory are grown commercially in twenty States. The areas of greatest production, however, are where a limestone soil, heavy rainfall, or irrigation is combined with cool weather during the growing season.

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[1] Also presented to the Faculty of the Graduate School of Cornell University, August, 1926, as a major thesis in partial fulfillment of the requirements for the degree of doctor of philosophy.

AUTHOR'S ACKNOWLEDGMENTS. The investigation herein reported was conducted under the direction of Professors E. G. Misner and G. F. Warren, of the Department of Agricultural Economics and Farm Management, New York State College of Agriculture at Cornell University, Ithaca, New York. Professors H. C. Thompson, J. E. Boyle, and W. I. Myers, of the College, also gave valuable suggestions on various phases of the study. One hundred and twenty New York farmers cooperated in furnishing the cost-of-production data. The following agencies cooperated in furnishing data on shipments, costs, and prices: Erie County Growers' and Shippers' Association, Inc., Orchard Park; Associated Pea Growers of Madison County, Morrisville; Madison County Pea Growers Cooperative Association, Poolville; and the J. Hamburger Company, Jill Bros., R. T. Cochrane & Co., A. E. Meyer & Co., P. S. Collins, George Allison & Co., L. Casazza, and the A. C. Martin Corporation, all of New York City. Much information was furnished also by the New York and Washington offices of the Bureau of Agricultural Economics, United States Department of Agriculture. To these and to many others who have given valuable assistance, the writer is greatly indebted. The photograph reproduced on the front cover was furnished by the Erie County Growers' and Shippers' Association, Inc.

[2] Green peas for market are referred to as "market peas," "green peas," "picking peas," or "green peas for table consumption." Green peas for canning are usually referred to as "canning-factory peas." In this bulletin all references are to green peas for market unless the term "canning-factory peas" is used.

In table 1 are given the acreages of green peas for market, by States, for the years 1918 to 1928 inclusive. The early peas are grown in Arizona,

TABLE 1. ACREAGE OF GREEN PEAS FOR TABLE USE IN THE UNITED STATES, 1918 TO 1928 INCLUSIVE*

| | 1918 | 1919 | 1920 | 1921 | 1922 | 1923 | 1924 | 1925 | 1926 | 1927 | 1928 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Number of acres | | | | | | | | | | |
| Early peas: | | | | | | | | | | | |
| Arizona | ..... | ..... | ..... | ..... | ..... | 200 | 450 | 1,150 | 400 | 500 | 60 |
| California, Imperial County | 1,040 | 1,300 | 1,200 | 1,200 | 2,000 | 1,420 | 950 | 1,400 | 4,000 | 5,700 | 9,000 |
| California, other | ..... | ..... | ..... | ..... | ..... | ..... | 5,110 | 5,100 | 11,950 | 21,110 | 16,810 |
| Florida | 270 | 300 | 360 | 300 | 470 | 2,250 | 1,330 | 2,250 | 760 | 700 | 980 |
| Louisiana | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 530 | 760 | 1,600 | 1,330 |
| Mississippi | 60 | 680 | 1,100 | 2,350 | 3,180 | 1,920 | 2,380 | 2,000 | 2,050 | 2,250 | 2,200 |
| North Carolina | 180 | 160 | 220 | 370 | 2,360 | 3,930 | 4,770 | 3,840 | 3,880 | 3,960 | 4,390 |
| South Carolina | 310 | 250 | 520 | 420 | 650 | 1,630 | 1,720 | 1,160 | 1,700 | 2,200 | 3,100 |
| Virginia | 900 | 900 | 950 | 1,530 | 1,720 | 2,530 | 2,000 | 2,300 | 2,440 | 3,000 | 3,000 |
| Late peas: | | | | | | | | | | | |
| Colorado | ..... | ..... | ..... | ..... | 300 | 380 | 850 | 2,560 | 1,940 | 4,000 | 6,500 |
| Delaware | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 60 | 80 | 80 |
| Maryland | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 450 | 450 | 450 | 560 |
| New Jersey | 2,110 | 2,080 | 2,090 | 2,320 | 1,460 | 1,320 | 3,200 | 3,500 | 3,800 | 4,000 | 4,800 |
| New York | 1,100 | 1,170 | 1,230 | 1,500 | 1,650 | 1,800 | 4,920 | 6,980 | 8,070 | 6,940 | 7,500 |
| Tennessee | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 460 | 500 | 500 | 500 |
| Utah | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 200 | 200 | 230 |
| Total | 5,970 | 6,840 | 7,670 | 9,990 | 13,790 | 17,380 | 27,680 | 33,680 | 42,960 | 57,190 | 61,040 |

* From Bureau of Agricultural Economics, United States Department of Agriculture. Data for 1924 from *Crops and Markets*, December, 1927. Data for 1925, 1926, 1927, and 1928, from *Crops and Markets*, December, 1928.

California, Florida, Louisiana, Mississippi, North Carolina, South Carolina, and Virginia; while the late peas are produced mainly in New York, New Jersey, Colorado, Delaware, Maryland, Tennessee, and Utah. California led in acreage for 1928, with 42.3 per cent of the total United States acreage. New York was second, with 12.3 per cent of the total 1928 acreage.

Prior to 1921 the States leading in acreage of green peas were New Jersey, New York, and California. At that time most of the green-pea areas were near the primary markets. New York and New Jersey supplied the eastern markets to a large extent, and California supplied the western markets.

Improved transportation facilities and higher prices since 1921 have resulted in a considerable shift in green-pea acreage. Mississippi increased her acreage from 60 acres in 1918 to 3180 acres in 1922. Since then the acreage has been less, with 2200 acres in 1928. The acreage in Virginia also began to increase in 1921, and continued to increase up to 3000 acres in 1928. In North Carolina the acreage was 2360 in 1922 as compared with 370 the year before. The acreage continued to increase in that State up to 1924. South Carolina and Florida followed North Carolina. The acreage in Florida was increased considerably in 1923, 1924, and 1925. The largest acreage grown in South Carolina was grown in 1928.

Along with the development of refrigerator cars, this stimulus in pea production has resulted in the opening of several new areas of production in the Western States. In 1922, 300 acres were reported for Colorado. By 1928 this number had increased to 6500 acres. In 1923 Arizona reported 200 acres of green peas for the first time; the acreage in that State had increased to 1150 acres by 1925, but it has been decreasing since.

These irrigated regions, with their limestone soils and cool weather during the growing season, are ideal for the production of high-quality peas. Adequate transportation facilities, and prices that will justify the cost of the long haul, will soon encourage pea production where the climatic conditions are so favorable as in irrigated regions.

While the shifts in acreage and the widening of the areas of production have been most marked in the States relatively far from the primary markets, the most favorable green-pea areas near the markets also have experienced some changes. The very factors that have made it profitable for peas to be grown 1500 miles from the place of consumption have stimulated the production in the near-by sections also.

In regions of New York where the weather conditions permit of a fairly long growing season and where the advantage of nearness to market is combined with a well-drained calcareous soil, growers have increased their acreage of green peas. The areas of production, however, are practically the same as they were eight years ago. The principal changes effected in New York have been the increased acreage within the most favorable areas.

TABLE 2. PRODUCTION OF GREEN PEAS FOR TABLE USE IN THE UNITED STATES, 1918 TO 1928*

| | Thousands of bushel hampers | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1918 | 1919 | 1920 | 1921 | 1922 | 1923 | 1924 | 1925 | 1926 | 1927 | 1928 |
| Early peas: | | | | | | | | | | | |
| Arizona | ..... | ..... | ..... | ..... | ..... | 13 | 14 | 52 | 11 | 25 | 3 |
| California, Imperial County | 73 | 91 | 96 | 78 | 96 | 78 | 52 | 66 | 400 | 365 | 540 |
| California, other | ..... | ..... | ..... | ..... | ..... | ..... | 266 | 224 | 598 | 2,132 | 1,967 |
| Florida | 12 | 15 | 18 | 18 | 25 | 135 | 78 | 86 | 40 | 34 | 54 |
| Louisiana | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 26 | 37 | 78 | 77 |
| Mississippi | 3 | 34 | 55 | 153 | 270 | 108 | 162 | 104 | 195 | 169 | 156 |
| North Carolina | 13 | 13 | 15 | 33 | 194 | 295 | 343 | 415 | 213 | 277 | 351 |
| South Carolina | 23 | 18 | 31 | 32 | 60 | 106 | 71 | 93 | 95 | 99 | 183 |
| Virginia | 81 | 90 | 66 | 161 | 194 | 240 | 170 | 184 | 117 | 291 | 264 |
| Late peas: | | | | | | | | | | | |
| Colorado | ..... | ..... | ..... | ..... | 14 | 28 | 68 | 256 | 120 | 200 | 357 |
| Delaware | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 4 | 7 | 6 |
| Maryland | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 29 | 27 | 35 | 36 |
| New Jersey | 106 | 135 | 125 | 151 | 111 | 106 | 182 | 192 | 323 | 360 | 384 |
| New York | 77 | 70 | 86 | 90 | 129 | 153 | 492 | 510 | 646 | 923 | 660 |
| Tennessee | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 21 | 25 | 28 | 35 |
| Utah | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 30 | 16 | 23 |
| Total | 388 | 466 | 492 | 716 | 1,093 | 1,262 | 1,898 | 2,258 | 2,881 | 5,039 | 5,096 |

* From Bureau of Agricultural Economics, United States Department of Agriculture. Data for 1924 from *Crops and Markets*, December, 1927. Data for 1925, 1926, 1927, and 1928, from *Crops and Markets*, December, 1928.

The production of green peas for market has had a rather phenomenal growth. The acreage in the United States for 1928 was 1022 per cent of the 1918 acreage in the same areas. In New York State the 1928 acreage had increased to 682 per cent of the 1918 acreage. In bushels produced, the percentages are 1313 and 857 for the United States and New York, respectively, for the same years.

This striking growth of a previously minor farm enterprise is due largely to four factors:

First, improved transportation facilities have permitted perishable produce to be shipped long distances. The development of the refrigerator

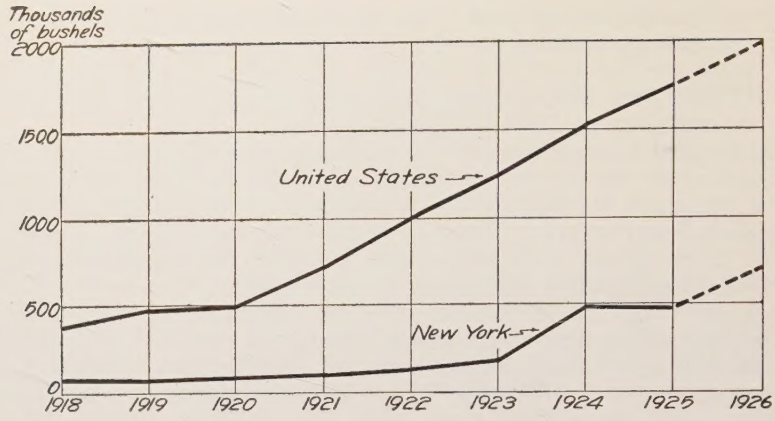



FIGURE 1. PRODUCTON OF MARKET PEAS IN NEW YORK AND THE UNITED STATES, 1918 TO 1925

(From Market Reports, Bureau of Agricultural Economics, United States Department of Agriculture)

The broken lines represent July estimates

car has brought about a new epoch in the fruit and vegetable business. Between 1902 and 1913 the population of United States increased approximately 25 per cent; the railroad mileage increased 23 per cent; the tonnage of perishable products increased 44 per cent; the number of freight cars of all classes increased 47 per cent; and the number of refrigerator cars increased from 18,222 to 43,389, or 138 per cent. At the end of 1917 there were 117,337 refrigerator cars, and by 1922 the number had increased to about 140,000.[3]

Secondly, the rapid growth of our cities has created a larger outlet for fruit and vegetable products.

The third factor is education. In recent years the desirability of having plenty of fruits and vegetables in the diet has been stressed by physicians, writers, and teachers. Such terms as *vitamins* are now common household words. Children, especially, have been urged to eat more fresh fruits and vegetables. This has influenced both the daily consumption and the length of season for many fruits and vegetables. In New York City most of the 78 fruits and vegetables reported in the car-lot receipts for 1925 by the federal Bureau of Agricultural Economics were on the market every month in the year. Even green peas were available in New York and Philadelphia every business day of the year in 1925.

Finally, the relatively high purchasing power of city people since the World War has permitted them to buy a greater variety of foods, particularly the more expensive kinds. Since green peas are considered more as a specialty than as one of the items of a regular menu, relatively few are purchased when the budget is limited. However, when additional spending power becomes available, cheaper foods are replaced by the more expensive kinds such as green peas. This stronger demand stimulates prices, which in turn stimulates production. Should the wages of city people decline, it is likely that some of the luxury foods would be replaced by the cheaper foods. With many families, green peas are considered a luxury. Should the spending power of such persons be

[3] From United States Department of Agriculture, *Agriculture Yearbook, 1924*, page 531.

affected adversely, the demand for green peas would probably not be so great. With lower prices the marginal areas and the marginal growers would be affected first; farmers with relatively low growing and marketing costs would be least affected.

Green peas, however, are not the only crop that has been influenced greatly by the increased earnings of city people. Most of the fruits and green vegetables — relatively expensive foods — have increased very greatly in production since 1917. A comparison of the trends in car-lot shipments, in the United States, of cabbage and potatoes, with celery, lettuce, and grapefruit, from 1917 to 1925, is given in table 3. Shipments

TABLE 3. COMPARISON OF THE TRENDS IN CAR-LOT SHIPMENTS, IN THE UNITED STATES, OF CABBAGE AND POTATOES, WITH CELERY, LETTUCE, AND GRAPEFRUIT, 1917 TO 1925*

| Year | Relatively cheap foods | | | Relatively expensive foods | | | |
|---|---|---|---|---|---|---|---|
| | Car lots of cabbage | Car lots of potatoes | Average per cent (1917=100) | Car lots of celery | Car lots of lettuce | Car lots of grapefruit | Average per cent (1917=100) |
| 1917 | 29,381 | 161,596 | 100 | 6,577 | 5,428 | 3,148 | 100 |
| 1918 | 23,484 | 176,552 | 105 | 5,972 | 6,959 | 6,466 | 128 |
| 1919 | 33,157 | 167,870 | 105 | 7,734 | 8,018 | 11,324 | 179 |
| 1920 | 30,737 | 199,165 | 120 | 11,552 | 13,818 | 11,546 | 244 |
| 1921 | 41,196 | 238,546 | 146 | 12,396 | 18,616 | 13,485 | 294 |
| 1922 | 37,857 | 254,177 | 153 | 16,368 | 22,240 | 17,672 | 371 |
| 1923 | 37,011 | 242,099 | 146 | 16,983 | 38,713 | 19,991 | 499 |
| 1924 | 41,945 | 252,589 | 154 | 18,429 | 36,272 | 21,197 | 501 |
| 1925 | 39,012 | 220,273 | 136 | 21,895 | 36,470 | 21,202 | 525 |

* From Bureau of Agricultural Economics, United States Department of Agriculture.

of cabbage and potatoes, which are relatively cheap foods, increased only 136 per cent from 1917 to 1925, while celery, lettuce, and grapefruit shipments for 1925 averaged 525 per cent of the 1917 shipments. These few examples are given merely to illustrate the effect of increased buying power of city consumers during and since the war.

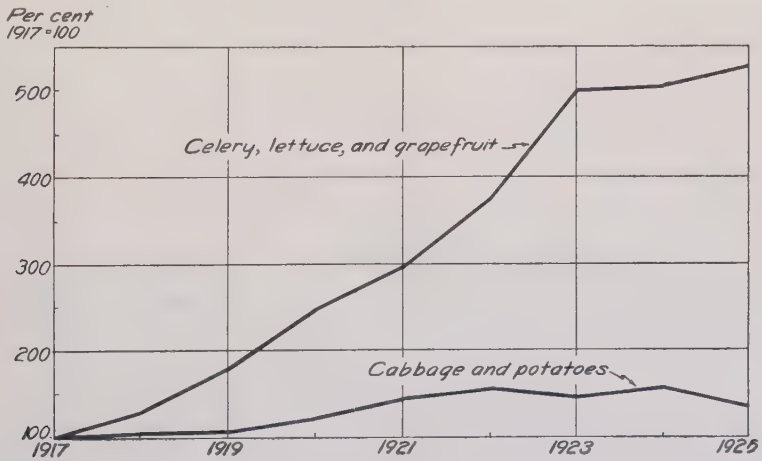



FIGURE 2. CAR-LOT SHIPMENTS OF CABBAGE AND POTATOES, AND OF CELERY, LETTUCE, AND GRAPEFRUIT, IN THE UNITED STATES, 1917 TO 1925
(From Bureau of Agricultural Economics, United States Department of Agriculture)

The areas of market-pea production in New York are shown in figure 3. The Madison area in central New York, and the Erie County area in western New York, are the most important sections. A few acres of market

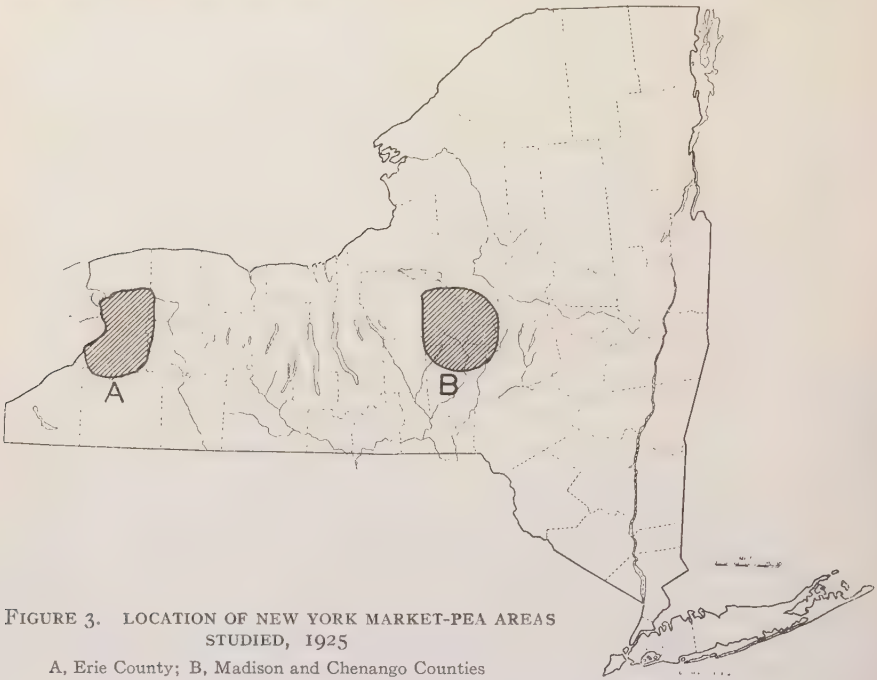



FIGURE 3. LOCATION OF NEW YORK MARKET-PEA AREAS STUDIED, 1925

A, Erie County; B, Madison and Chenango Counties

peas are produced also on Long Island and on market-gardening farms near the larger up-state cities, such as Albany, Syracuse, and Rochester.

The most intensive market-pea production is found in the Madison area. From one-half to three-fourths of the total pea crop of the State is produced in this section. Green peas constitute the chief cash crop for the most of the farmers. In fact, many growers in this area have specialized in the production of peas.

The special reason why this area is such an intensive green-pea section is because of the relatively cool weather during the entire summer. This permits an unusually long growing season, and so, with plenty of rainfall, high yields of good-quality peas can be obtained. Particularly is this true of the better hill farms. On this type of soil, with other conditions favorable, the late varieties of peas can be matured as late as October and still have the excellent qualities of early-season peas. Occasionally, however, too much rain, or long periods of dry, hot weather, adversely affect both the yield and the quality of market peas.

In this section most farmers drill the peas in rows about three feet apart. They begin planting the early varieties usually about April 1, and the peas are harvested in the latter part of June and the first half of July. The late varieties are planted mostly in May, so that they can be harvested

immediately following the early peas. Large growers plant only a few acres at a time — from two to four acres a week — during most of April and May. This method spreads the harvesting over a long period, keeping the colony of pickers constantly employed. Only by so doing can large acreages be operated by one grower, for peas must be picked and marketed when they are ready, and, furthermore, the picking is all done by hand, requiring many hours of man, woman, and child labor.

The peas are cultivated until the vines fall over between the rows. A few growers use grain drills with all cups open, and do no cultivating. The peas are then left to mature and are ready to pick in about sixty days after planting. They are picked in bushel baskets, shipped by express or in iced freight cars to New York, Philadelphia, or other markets, and sold by commission merchants for 10 per cent of the selling price. Some growers ship direct, some sell to local dealers, some sell their crop in the field before it is picked, and some grow peas on a share-partnership arrangement by which one does the growing and the other the harvesting and marketing. Many growers now ship thru a cooperative association, there being two large associations of this kind in this area.

The market-pea section in Erie County is about fifteen to twenty miles south of Buffalo, in the market-garden area near Lake Erie. The chief centers of production are around Orchard Park, Hamburg, and Eden Valley. The soil is somewhat sandy, and so the peas from this section usually reach the market earlier than the peas from the Madison area. The pea season is shorter, however, than in the Madison area. In the Erie area, it is very difficult to mature salable peas much later than August 1.

Pea production is not so intensive in this section as in the Madison area. Most growers have a succession of market-garden crops, with just a few acres of peas. The largest grower interviewed had 28 acres of peas, while the average of the 63 farms was 5.5 acres.

Most of the pea growers in the Erie area drill the peas with all the drill cups open, and let them mature without cultivation. Some of the peas are picked in $1\frac{1}{2}$-bushel bags and trucked into Buffalo with other vegetables, and sold on the Elk Street Public Market. Most of them, however, are picked in bushel baskets, trucked to Orchard Park, and shipped thru the cooperative association. About 90 per cent of the pea growers in this area are members of the Erie County Growers' and Shippers' Association, Inc., at Orchard Park. The growers may sell their peas in Buffalo or ship them thru the association, so long as they do not sell to shippers competing with the association.

These areas, besides having soil and weather conditions favorable to green-pea production, are provided with excellent transportation facilities — an essential factor in getting the peas to market in a salable condition. Erie County is a little farther from New York City than the Madison area is, but it is also nearer other important primary markets such as Chicago, Cleveland, and St. Louis (table 4).

The Madison area is served by two railroads with direct routes to New York and Philadelphia. The New York, Ontario & Western Railway handles the peas from Morrisville, Solsville, Oriskany Falls, Bouckville, Hamilton, Randallsville, Earlville, and other minor points along the line. In 1924 there were 459 carloads of green peas shipped by freight from these

TABLE 4. DISTANCES FROM MAIN GREEN-PEA SHIPPING STATIONS IN MADISON AND ERIE COUNTIES, TO NEW YORK CITY

| Shipping station | County | Railroad | Miles to New York |
|---|---|---|---|
| Morrisville Station | Madison | New York, Ontario & Western | 253 |
| Hamilton | Madison | New York, Ontario & Western | 250 |
| Poolville | Madison | Delaware, Lackawanna & Western. | 253 |
| Earlville | Madison | Delaware, Lackawanna & Western. | 250 |
| Hubbardsville | Madison | Delaware, Lackawanna & Western. | 257 |
| Orchard Park | Erie | Buffalo, Rochester & Pittsburgh; and Delaware, Lackawanna & Western | 410 |
| Orchard Park | Erie | Buffalo, Rochester & Pittsburgh; and Lehigh Valley | 460 |

seven stations. In 1925, due to decreased yields, there were only 212 carloads shipped from the same stations. These shipments do not include the express or the less-than-car-lot shipments.

TABLE 5. CAR-LOT SHIPMENTS OF MARKET PEAS OVER THE NEW YORK, ONTARIO & WESTERN RAILWAY FOR THE 1924 AND 1925 SEASONS

| Shipping station | Number of cars | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1924 | | | | | 1925 | | | | |
| | June | July | August | September | Total | June | July | August | September | Total |
| Morrisville | 0 | 44 | 115 | 9 | 168 | 1 | 11 | 6 | 0 | 18 |
| Hamilton | 0 | 15 | 98 | 15 | 128 | 2 | 52 | 39 | 0 | 93 |
| Solsville | 1 | 32 | 60 | 1 | 94 | 0 | 22 | 12 | 0 | 34 |
| Randallsville | 0 | 10 | 13 | 2 | 25 | 1 | 15 | 11 | 0 | 27 |
| Bouckville | 0 | 16 | 19 | 1 | 36 | 1 | 18 | 5 | 0 | 24 |
| Earlville | 0 | 0 | 0 | 3 | 3 | 0 | 11 | 5 | 0 | 16 |
| Oriskany Falls | 0 | 1 | 4 | 0 | 5 | 0 | 0 | 0 | 0 | 0 |
| Total | 1 | 118 | 309 | 31 | 459 | 5 | 129 | 78 | 0 | 212 |

The Delaware, Lackawanna & Western Railroad serves the stations of Hubbardsville, Poolville, Earlville, Sherburne, and other points of less importance in the Madison area. In 1924 there were 62 carloads of green peas shipped by freight from the three stations of Earlville, Poolville, and Hubbardsville. In 1925 there were no car-lot shipments by freight from Earlville, and only 40 cars from Poolville and Hubbardsville, not including express and less-than-car-lot shipments. The express shipments amounted to approximately 10 cars in 1925 from these three points, or about one-fifth of the total shipments.

On the Delaware, Lackawanna & Western Railroad, the cars are iced in Binghamton in the evening and delivered to the farmers' shipping station early the next morning. This gives the grower a pre-cooled refrigerator car ready for loading on the day when the peas are picked. The loaded car moves out at about six o'clock in the evening, and arrives in Hoboken,

New Jersey, the next afternoon at about four o'clock. From that time until ten o'clock in the evening, the trucks are busy unloading the peas and trucking them across the Hudson River to the various commission houses on Washington Street so that they will be ready for the midnight market.

Cars going to Boston move in about the same time, but shipments to Philadelphia, Baltimore, and Washington require an extra day.

Peas shipped over the New York, Ontario & Western Railway are handled in practically the same manner. The terminal of this road for the New York market is at Weehawken, New Jersey, instead of at Hoboken. However, the peas arrive in the afternoon in time for the midnight market in New York.

The market-pea section in Erie County is served by one main-line railroad and one branch-line road. Practically all of the shipments, however, go from Orchard Park over the main line of the Buffalo, Rochester & Pittsburgh Railway. Since this road does not go directly to any of the primary markets except Pittsburgh, the cars have to be transferred, depending on the destination of the peas. Shipments billed for New York City and Philadelphia go into Buffalo on the Buffalo, Rochester & Pittsburgh Railway, and are there transferred to the Lehigh Valley Railroad. This schedule gets the peas into Hoboken on the second day after shipment, in time to be trucked over to Manhattan for the midnight market.

### TRANSPORTATION RATES ON PEAS

The commodity rates for green peas do not include the cost of refrigeration. Where cars are shipped under initial icing, the shipper pays for the actual ice put in the car at the first icing. If a car is held over for any reason by the shipper at the loading station, he has the privilege of re-icing the car there at his own expense. Most of the peas are shipped under initial icing charges which cost the shipper from $20 to $25 per car for ice, plus $7.50 bunkerage charge. This brings the total cost per bushel, when the peas are shipped by freight in refrigerator cars, to from 18 to 25 cents. The express rate per bushel is 149 per cent of the average freight cost per bushel.

Freight and express rates from Orchard Park to important markets are given in tables 6 and 7. Refrigeration charge is extra, averaging about $25 per car.

### TYPES OF CONTAINERS USED IN THE VARIOUS AREAS

Growers in the Erie and Madison areas of New York use the bushel hamper for market peas, and those in Otsego County and on Long Island use 4/5-bushel bags. Some of the New Jersey peas are trucked into New York in 4/5-bushel bags, and some in bushel baskets.

The peas from North Carolina, South Carolina, Mississippi, Virginia, and Maryland, are nearly all shipped in the bushel hamper or basket. Most of the California and Mexico peas come in 2-bushel crates similar to the common lettuce crate. Some of the California peas, however, are shipped in 2-bushel drums, and a few shipments from California and Mexico come in the standard bushel baskets.

When the lettuce crate is used, heavy oiled paper is put inside the crate.

TABLE 6. FREIGHT RATES ON GREEN PEAS*

| From | Destination | | |
|---|---|---|---|
| | New York | Philadelphia | Chicago |
| | (Per hundredweight) | (Per hundredweight) | (Per hundredweight) |
| New York: | | | |
| Orchard Park | ..... | ..... | $0.49 |
| Hamilton | $0.34 | $0.34 | 0.54 |
| Morrisville | 0.34 | 0.34 | 0.54 |
| Solsville | 0.34 | 0.34 | 0.54 |
| Deansboro | 0.34 | 0.34 | 0.54 |
| | (Per bushel package) | (Per bushel package) | (Per bushel package) |
| North Carolina: | | | |
| Elizabeth City | $0.30 | $0.30 | $0.45 |
| Mackeys | 0.305 | 0.305 | 0.45 |
| Plymouth | 0.305 | 0.305 | 0.435 |
| Calypso | 0.305 | 0.305 | 0.50 |
| Mt. Olive | 0.305 | 0.305 | 0.50 |
| South Carolina: | | | |
| Charleston | 0.305 | 0.305 | 0.405 |
| Lake City | 0.305 | 0.305 | 0.405 |
| Holly Hill | 0.305 | 0.305 | 0.405 |
| Cades | 0.305 | 0.305 | 0.405 |
| Elloree | 0.305 | 0.305 | 0.405 |
| | (Per hundredweight) | (Per hundredweight) | (Per hundredweight) |
| California: | | | |
| Brawley | $1.75 | $1.75 | $1.46 |
| Hayward | 1.75 | 1.75 | 1.46 |
| El Centro | 1.75 | 1.75 | 1.46 |
| San Leandro | 1.75 | 1.75 | 1.46 |
| San Francisco | 1.75 | 1.75 | 1.46 |

* From United States Bureau of Railway Economics, May 14, 1926. These rates do not include charges for refrigeration or other special services.

After the peas are put in, the paper is folded over so that the peas are completely wrapped, except at the ends where an air space is left for ventilation. Usually a chunk of ice is placed in the center among the peas, toward the top of the crate, to aid in refrigeration for the long haul. The peas shipped in drums and baskets from California are usually iced in the same manner as are those in the crates.

Iceberg-lettuce crates are used entirely in Colorado, and mostly in Washington, Idaho, and Utah. They are packed and iced in practically the same way as are the California crates.

Florida peas are shipped mostly in 28-quart baskets (1 3/8 bushels), tho a few shipments are sent in the regular bushel baskets.

In general, the bushel hamper or basket is coming to be used more and more by the near-by States, and the crate for the more distant areas. The bag and the odd-sized hamper are gradually going out of use. The bushel basket and the 2-bushel crate have many advantages over other kinds of containers. They are light in weight, easily handled, easily ventilated, and yet relatively inexpensive. Moreover, the peas are in bushel units,

TABLE 7. EXPRESS RATES PER HUNDRED POUNDS ON GREEN PEAS, MARCH 1, 1925*

| From | Destination | | |
|---|---|---|---|
| | New York | Philadelphia | Chicago |
| New York: | | | |
| Orchard Park | $1.23† | $1.99§ | $2.21§ |
| Hamilton | 1.02† | 1.54§ | 2.55§ |
| Morrisville Station | 1.02† $0.73‡ | 1.54§ | 2.55§ |
| Solsville | 1.02† | 1.54§ | 2.55§ |
| Deansboro | 1.02† | 1.69§ | 2.55§ |
| North Carolina: | | | |
| Elizabeth City† | 1.69 | 1.42 | 2.67 |
| Mackeys† | 2.17 | 1.99 | 2.94 |
| Plymouth† | 2.17 | 1.99 | 2.94 |
| Calypso† | 1.99 | 1.84 | 2.78 |
| Mt. Olive† | 1.99 | 1.84 | 2.78 |
| South Carolina: | | | |
| Charleston† | 2.62 | 2.52 | 3.20 |
| Lake City† | 2.52 | 2.37 | 3.09 |
| Holly Hill† | 2.52 | 2.26 | 3.00 |
| Cades† | 2.52 | 2.37 | 3.09 |
| Elloree† | 2.52 | 2.26 | 3.00 |
| California: | | | |
| Brawley‡ | 3.83 | 3.83 | 3.21 |
| Hayward‡ | 3.83 | 3.83 | 3.21 |
| El Centro‡ | 3.83 | 3.83 | 3.21 |
| San Leandro‡ | 3.83 | 3.83 | 3.21 |
| San Francisco‡ | 3.83 | 3.83 | 3.21 |

* From United States Bureau of Railway Economics, May 14, 1926. These rates do not include charges for refrigeration or other special services.
† Any quantity rate — L/C/L.
‡ Carload commodity rate.
§ Second-class rate.

which greatly facilitates the marketing process thruout. Usually, peas are picked by the bushel rate, express and cartage are charged at so much a bushel, and prices, both wholesale and retail, are quoted on the bushel basis. Hence it is much simpler and easier for every one if the bushel-unit container is used.

### COMPETITION BETWEEN MARKET-PEA AREAS

The competition between the different market-pea areas has greatly changed, thru the effect of the relatively high prices for the past eight years. Prior to 1924, New York peas had no competition except from New Jersey during the month of June. By 1925, however, Colorado, Idaho, and Utah peas had become serious factors in determining the price of late peas in August and September. In 1926, shipments from California and Washington during the last part of June and the first part of July affected the price of early varieties. The 1926 season was so late, however, that the first peas from Erie County did not arrive on the market until July 1, and the first peas from the Madison area did not arrive until July 7; while in 1925, the first shipments from Erie County were made on June 13 and the first shipments from the Madison area on June 19.

The Erie peas usually reach the market from one to two weeks earlier than do the Madison peas. Most of the early-variety peas from Erie County are sold before the first peas from the Madison area reach the market. That gives them the advantage of the high prices for the first New York State peas.

When the early varieties from the Madison area come on, they are in competition with the late varieties from Erie County. Since the late varieties are superior in quality to the early varieties, the peas from Erie County appear to sell higher than do the peas from the Madison area during the first part of July. When the late varieties from the Madison area come on, however, in competition with the remainder of the late varieties from Erie County, the Madison peas then sell at the higher prices.

The competition between market-pea areas after the New York season is over, in September, did not become very noticeable until the western peas first came on the New York market. Virginia was the main source of supply during October and November, with a few scattered shipments from Maryland and North Carolina. Beginning with December, however, when the new season really commences, pea shipments from Florida, Mexico, and California now come into New York almost continuously until the first of April. Arizona peas start about April 1, followed by the South Carolina peas about two weeks later. Shipments from those two areas continue for about two months. During the latter part of April the first peas from Mississippi arrive, followed in a week or ten days by the North Carolina peas. The Virginia and Maryland early crops come in May, while the North Carolina harvest is at its height. Consequently, in 1925 the receipts of peas in May exceeded the receipts in July, the high month for New York shipments.

The effects of this competition between the various regions are shown clearly in the price variations. In the winter and early spring, shipments are light and prices are relatively high. As the spring crops come in from other regions, prices gradually work lower. The first shipments from each successive region coming on the market sell for higher prices than do the peas from the preceding area. The average price for each region, however, gets lower as the season advances and as the supplies increase. California, Mexico, and Florida peas sell for the highest prices. Then the peas from Arizona, South Carolina, Mississippi, North Carolina, Virginia, Maryland, New Jersey, and finally New York, sell at an average price lower than the peas from the preceding area commanded.

## PRACTICES FOLLOWED IN PRODUCING MARKET PEAS IN THE MADISON AND ERIE AREAS

The cost-of-production data in this study were obtained for the 1925 season from the two principal market-pea areas in New York. The Madison area, in central New York, includes most of Madison County and the northern part of Chenango County. The other area studied is in western New York, in the southern half of Erie County.

The total acreage of market peas for the 57 records taken in the Madison area was 606, an average of 10.6 acres per farm. In Erie County a total of 347 acres, with an average of 5.5 acres, were grown on the 63 farms.

*Kinds of crops grown*

The kinds of crops grown in the two market-pea areas, the number of farms growing each crop, and the number of acres per farm for each crop, are given in table 8.

TABLE 8. CROPS GROWN IN 1925 ON FARMS ON WHICH COST DATA WERE OBTAINED

| Crop | Madison area | | | Erie County | | |
|---|---|---|---|---|---|---|
| | Number of farms | Acres per farm growing | Acres per farm | Number of farms | Acres per farm growing | Acres per farm |
| Green peas | 57 | 10.6 | 10.6 | 63 | 5.5 | 5.5 |
| Cabbage | 32 | 5.5 | 3.1 | 15 | 1.8 | 0.4 |
| Potatoes | 38 | 2.6 | 1.8 | 53 | 6.2 | 5.2 |
| Cucumbers | 2 | 1.2 | 0.0 | 27 | 1.5 | 0.6 |
| Cauliflower | ..... | ..... | ..... | 25 | 2.9 | 1.2 |
| Beans | 5 | 1.8 | 0.2 | 22 | 29.2 | 10.2 |
| Tomatoes | ..... | ..... | ..... | 21 | 5.9 | 2.0 |
| Strawberries | 1 | 1.5 | 0.0 | 22 | 7.9 | 2.8 |
| Raspberries | ..... | ..... | ..... | 13 | 16.8 | 3.5 |
| Other truck crops | 6 | 1.9 | 0.2 | 13 | 3.4 | 0.7 |
| Corn* | 43 | 8.9 | 6.7 | 47 | 8.5 | 6.4 |
| Oats | 28 | 5.8 | 2.9 | 34 | 7.9 | 4.3 |
| Barley | 12 | 10.0 | 2.1 | 1 | 1.0 | 0.0 |
| Oats and barley | 9 | 12.8 | 2.0 | ..... | ..... | ..... |
| Wheat | 13 | 6.0 | 1.4 | 14 | 3.5 | 0.8 |
| Buckwheat | 10 | 9.5 | 1.7 | 8 | 5.4 | 0.7 |
| Rye | ..... | ..... | ..... | 5 | 13.6 | 1.1 |
| Mixed hay | 46 | 30.5 | 24.6 | 44 | 20.2 | 14.1 |
| Alfalfa | 9 | 8.9 | 1.4 | 3 | 3.0 | 0.1 |
| Orchard | 2 | 1.0 | 0.0 | 6 | 13.2 | 1.3 |
| Other crops | 9 | 6.8 | 1.1 | 18 | 15.5 | 4.4 |

* Includes corn for grain, corn for silage, and sweet corn for market.

In the Madison area, corn, oats, hay, cabbage, and potatoes were grown by most farmers growing peas. In Erie County, most of the farmers grew some potatoes, corn, oats, hay, and other truck crops besides peas. The more common truck crops were cauliflower, cucumbers, tomatoes, sweet corn, and berries.

The common rotation in the Madison area is to put corn on the meadow land, and follow with peas, cabbage, or potatoes. After four or five years of the cultivated crops, the land is seeded down to clover, with oats or wheat as a nurse crop. On the hill farms, buckwheat often follows peas. When the land is planted to early peas, the buckwheat often makes a crop worth harvesting; if the buckwheat is planted after late varieties of peas, it is plowed under as a green manure. On these farms, peas, grain, and hay constitute the main rotation.

In Erie County the practices vary considerably. In the market-gardening section, two or more crops are grown on the better land in the same year. After the early peas have been harvested, late varieties of beans, turnips, cucumbers, or potatoes are frequently planted. A common rotation is to

grow sweet corn or potatoes on the hay land, followed by peas, cauliflower, beans, or tomatoes. Then oats or wheat is used to seed down to clover again, after several years of cultivated crops.

Many variations in practices are found, where the different sections specialize to some extent in different truck crops. Some peas also are grown on general farms where dairying is the principal enterprise, with grain and hay the main crops.

### *Plowing practices*

The plowing practices of the two regions in 1925 were quite different from what they were in 1915. At the earlier time, horses were used entirely; while in 1925, 49.8 per cent of the pea land was plowed with tractors in the Madison area and 60.8 per cent in Erie County (table 9).

TABLE 9. PLOWING PRACTICES IN GROWING GREEN PEAS, 112 NEW YORK FARMS, 1925

| | Madison area | Erie County | All farms |
|---|---|---|---|
| Number of farms included | 55 | 57 | 112 |
| Acres spring-plowed | 348 | 205 | 553 |
| Acres fall-plowed | 250 | 125 | 375 |
| Per cent spring-plowed | 58.2 | 62.2 | 59.6 |
| Per cent fall-plowed | 41.8 | 37.8 | 40.4 |
| Average depth plowed (inches) | 6.5 | 6.8 | 6.6 |
| Acres plowed by horses | 304.2 | 140.1 | 444.3 |
| Acres plowed by tractor | 302 | 217.5 | 517.5 |
| Per cent plowed by horses | 50.2 | 39.2 | 46.2 |
| Per cent plowed by tractor | 49.8 | 60.8 | 53.8 |

For the 1925 pea crop, in the Madison area 58.2 per cent, and in Erie County 62.2 per cent, of the land was plowed in the spring. The average depth of plowing in the Madison area was 6.5 inches, and in Erie County 6.8 inches.

## COSTS AND RETURNS FOR MARKET PEAS

### *Methods of calculating costs*

In this study, all expenses incurred directly or indirectly in the production and marketing of the pea crop were included as costs. The farm value of the pea vines, if they were harvested, was credited to get the net cost. The gross sales less the net cost gave the net gain or loss from the enterprise.

The following items of cost and methods of computation were used:

*Seed and fertilizer.* All fertilizer applied in 1925 was charged to the crop of that year, and was charged at cost.

*Lime.* Only 20 per cent of the cost of lime was charged to peas.

*Manure.* The full value of manure, at the farmer's estimate, was charged to peas in both areas. On most farms in Erie County, manure is applied to all cultivated crops each year. In the Madison area, manure was applied directly to peas on only part of the farms, but peas receive some benefits from residual manure applied on preceding

crops. Since it was impossible to determine this residual effect, the total value of manure used on land in peas was charged on the farms where it was applied directly, to balance the cost on other farms where no manure was used for peas.

*Labor.* All hired labor was charged at cost. The operator's labor and other unpaid labor were charged at what the farmer estimated it would cost to hire labor of the same grade.

*Horse labor.* Horse labor also was charged at what the farmer estimated it would cost him to hire the work done.

*Use of tractor.* Use of tractor was charged at the rate estimated by the farmer. The estimates were based on what he could obtain per hour at custom work.

*Use of equipment.* Use of equipment was charged on all farms at 10 cents per hour of horse labor, the average cost in 1924 on the farms keeping accounts in cooperation with the New York State College of Agriculture. The reason for prorating machinery costs, which include machinery and harnesses, on the basis of the hours of horse labor, is that most farm machinery is drawn by horses and the cost varies approximately with the number of horses used.

*Use of truck or automobile.* Use of truck or automobile was charged at the farmer's estimate of cost per mile, or, if no estimate was given, 10 cents per mile was used.

*Freight, cartage, and commissions.* Freight, cartage, and commissions were charged at actual outlay. With the Erie County records, an adjusted summary was computed to include freight, cartage, commission, baskets, and association fees, which had been deducted by the cooperative association in computing the pooling rate. This was done to make the marketing cost, the net cost, and the gross sales comparable with the data for the Madison area.

*Interest.* Interest was charged for sixty days, at 6 per cent per annum, on seed, fertilizer, lime, and manure. These costs were usually incurred at the time of planting, and the returns from the peas were realized about two months later. Other costs, such as for baskets, labor, freight, and commissions, were usually paid for at the time when the peas were sold, and so there were no interest charges on these items.

*Use of land.* General farm expenses chargeable to crop land amounted to 8.6 per cent of the value of the crop land. On the New York farms keeping cost accounts in 1924, the charge for use of land owned or worked on shares was calculated by multiplying the farmer's estimate of the value of the crop land by 8.6 per cent. This rate included 6 per cent interest on the value of the land, taxes, and all other costs of upkeep. Where any of the land was double-cropped, the pea crop was charged one-half the annual cost for the use of the land double-cropped.

*Baskets, association fees, and other miscellaneous costs.* Baskets, association fees, and other miscellaneous costs were charged at actual outlays.

*Risks.* Some allowance was made for risk cost in computing the average cost of production by including all farms interviewed, a number of which had partial or total failures. Other than this, no charge was made for risk of business.

All farms that were operated on shares or on a contract basis were charged for the outlays and operations as if one person were owner and operator combined. This was done so that the costs of production on these farms would be comparable to those on farms of other growers, and could therefore be included in computing the average cost of production for the region.

Cost theorists will probably not approve all of the foregoing methods of computing the costs of producing peas. Some may object to including a charge for the operator's labor, or interest on his land and cash outlays. In anticipation of these objections, the purpose for which the cost figures are to be used should be considered. The primary purposes for which crop costs are calculated are to compare the given enterprise with other enterprises on the same farm, or the same enterprise on different farms or groups of farms, and also as a basis for studying the relative efficiency of different methods of production. In order to be useful for these purposes, cost figures must be computed on a comparable basis. For example, if one farmer does all the work in growing his peas while another hires all the

labor, the two businesses cannot be compared accurately unless the value of the operator's time is included in the former case. Likewise, in the case of land, if one grower uses land valued at $50 per acre and another uses land valued at $300 per acre, useful comparisons cannot be made without including interest on the different land values.

But some may still argue that land is different from other productive factors, because its value, they say, is determined by the value of its products and has no part in the determination of the price of its products. While this is only partly true for land, it is only partly true also for other factors of production. That is, any cost already incurred, such as use of land, buildings, or machinery, can have no effect on the price of the immediate products being produced. Similarly, picking cost, fertilizer outlay, or basket expense, can in no way affect the price of peas just ready to be shipped. All costs once incurred are as water gone over the dam, so far as their having any effect on prices of products already produced is concerned. Land costs are no different from any other factors of production in this respect.

However, this is not to deny that any of these outlays can be counted as cost of production because they have no influence on the current prices of their product. Surely they are all resistances to production in a forward-looking point of view, land rent the same as all other outlays. Furthermore, these costs are all truly price-determining. Each factor, thru its effect on the supply of peas produced, thereby affects the price at which peas will be sold. Possibilities for profits in pea production, for example, increase the demand for the good pea land. Prospective growers, in their efforts to secure the possible gains from this enterprise, bid up the price of the land until few growers feel that they can pay such a high rent and yet come out with the necessary gain at the end of the season. Consequently, fewer peas are produced. So, with an unchanged demand, the price of the product would be actually affected. Hence, use of land has really been a price-determining factor. Rightly, therefore, it should be included as a cost of production. It is one of the price resistances encountered in the growing of green peas for market.

## *Costs*

### *Cost of growing*

*Seed.* The largest item of cost in growing market peas is that of seed. The 63 farms in Erie County used an average of 3.41 bushels of seed per acre, at a cost of $28.01. In the Madison area, the 57 farms averaged 2.06 bushels of seed per acre, costing $16.94. The average for all farms was 2.55 bushels of seed per acre, costing $20.97. The average cost of seed per bushel of peas produced was 31 cents for Erie County, 14 cents for Madison County, and 19 cents for the two areas combined. The practice of drilling in Erie County requires more seed than does planting in rows with a corn planter, as is done in the Madison area.

The amount of seed used and the cost per acre of each variety in each area are shown in table 10.

TABLE 10. SEED USED ON 120 NEW YORK FARMS, 1925

| Variety | Erie County | | | Madison area | | | All farms | | |
|---|---|---|---|---|---|---|---|---|---|
| | Acres | Bushels | Value | Acres | Bushels | Value | Acres | Bushels | Value |
| Early peas: | | | | | | | | | |
| Thomas Laxton | 86.9 | 288.7 | $2,386 | 139.0 | 296.5 | $2,585 | 225.9 | 585.2 | $4,971 |
| Laxtonian | 9.2 | 32.0 | 285 | 27.5 | 61.0 | 578 | 36.7 | 93.0 | 863 |
| Gradus | 1.4 | 3.4 | 26 | 16.0 | 33.0 | 297 | 17.4 | 36.4 | 323 |
| Peter Pan | 11.0 | 35.7 | 288 | .... | .... | .... | 11.0 | 35.7 | 288 |
| Blue Bantam | 7.3 | 25.0 | 200 | .... | .... | .... | 7.3 | 25.0 | 200 |
| Alaska | 4.2 | 12.2 | 92 | .... | .... | .... | 4.2 | 12.2 | 92 |
| World Wonder | .... | .... | .... | 4.0 | 10.0 | 96 | 4.0 | 10.0 | 96 |
| World Record | 3.3 | 10.0 | 76 | .... | .... | .... | 3.3 | 10.0 | 76 |
| Early Dawn | 2.2 | 7.0 | 50 | .... | .... | .... | 2.2 | 7.0 | 50 |
| Early June | 1.3 | 4.5 | 32 | .... | .... | .... | 1.3 | 4.5 | 32 |
| World's Beater | 0.3 | 1.0 | 8 | .... | .... | .... | 0.3 | 1.0 | 8 |
| Total early peas | 127.1 | 419.5 | $3,443 | 186.5 | 400.5 | $3,556 | 313.6 | 820.0 | $6,999 |
| Per acre | | 3.30 | 27 | | 2.15 | 19 | | 2.61 | 22 |
| Late peas: | | | | | | | | | |
| Telephone | 139.7 | 470.0 | $3,809 | 359.2 | 732.0 | $5,805 | 498.9 | 1,202.0 | $9,614 |
| Alderman | 23.3 | 86.5 | 711 | 53.0 | 98.0 | 789 | 76.3 | 184.5 | 1,500 |
| Duke of Albany | 38.9 | 147.8 | 1,254 | 4.5 | 9.0 | 72 | 43.4 | 156.8 | 1,326 |
| Prince Edward | 13.4 | 46.0 | 393 | 2.5 | 5.0 | 39 | 15.9 | 51.0 | 432 |
| Hundredfold | 5.0 | 15.0 | 118 | .... | .... | .... | 5.0 | 15.0 | 118 |
| Total late peas | 220.3 | 765.3 | $6,285 | 419.2 | 844.0 | $6,705 | 639.5 | 1,609.3 | $12,990 |
| Per acre | | 3.47 | 29 | | 2.01 | 16 | | 2.52 | 20 |
| Grand total | 347.4 | 1,184.8 | $9,728 | 605.7 | 1,244.5 | $10,261 | 953.1 | 2,429.3 | $19,989 |
| Per acre | | 3.41 | $28 | | 2.06 | $17 | | 2.55 | $21 |
| Early peas, per cent of total | 36.6 | 35.4 | 35.4 | 30.8 | 32.2 | 34.6 | 32.9 | 33.8 | 35.0 |
| Late peas, per cent of total | 63.4 | 64.6 | 64.6 | 69.2 | 67.8 | 65.4 | 67.1 | 66.2 | 65.0 |

The proportion of early varieties to late varieties was about the same in both areas — one-third early and two-thirds late. In Erie County the seed cost per acre for early varieties was less than that for late varieties. Early seed usually costs more per bushel than does late seed. In Erie County a number of growers did not order as much seed thru their association as they finally planted. The prospects looked favorable for a good year, and many growers decided to increase their acreage after they had ordered seed thru the association. To do this, they had to buy seed wherever they could get it and at higher prices. Furthermore, since only a limited acreage of early peas can be grown profitably, most of the extra seed purchased was of the late varieties.

In the Madison area, the seed for early varieties cost more than the seed for the late varieties. The average cost for the early varieties was $19 per acre, and for the late varieties $16 per acre. For all farms in both areas, the cost of the early seed averaged $8.54 per bushel as compared with $8.07 for the late seed.

Of the early varieties, Thomas Laxton is the most widely grown. In Erie County, 68.4 per cent of the early-pea acreage in 1925 was Thomas Laxton (table 11). Peter Pan ranked second, with 8.7 per cent, and Laxtonian third, with 7.2 per cent. Other early varieties grown in Erie County, as shown in table 11, were Gradus, World Record, Blue Bantam, Early June, Alaska, and Early Dawn.

Thomas Laxton predominated also in the Madison area, comprising 74.5 per cent of the acreage of early peas. Laxtonian came next, with

TABLE 11. VARIETIES OF MARKET PEAS GROWN ON 120 NEW YORK FARMS, 1925

| Variety | Erie County | Madison area | All farms |
|---|---|---|---|
| | (Per cent of acres) | (Per cent of acres) | (Per cent of acres) |
| Early peas: | | | |
| Thomas Laxton | 68.4 | 74.5 | 72.0 |
| Laxtonian | 7.2 | 14.8 | 11.7 |
| Gradus | 1.1 | 8.6 | 5.6 |
| Peter Pan | 8.7 | ..... | 3.5 |
| Blue Bantam | 5.7 | ..... | 2.3 |
| Alaska | 3.3 | ..... | 1.3 |
| World Wonder | ..... | 2.1 | 1.3 |
| World Record | 2.6 | ..... | 1.1 |
| Early Dawn | 1.8 | ..... | 0.7 |
| Early June | 1.0 | ..... | 0.4 |
| World's Beater | 0.2 | ..... | 0.1 |
| Total early peas | 100.0 | 100.0 | 100.0 |
| Late peas: | | | |
| Telephone | 63.4 | 85.7 | 78.0 |
| Alderman | 10.6 | 12.6 | 11.9 |
| Duke of Albany | 17.7 | 1.1 | 6.8 |
| Prince Edward | 6.1 | 0.6 | 2.5 |
| Hundredfold | 2.2 | ..... | 0.8 |
| Total late peas | 100.0 | 100.0 | 100.0 |

14.8 per cent, and Gradus third, with 8.6 per cent. World Wonder, the only other early variety, made up the remaining 2.1 per cent of the early-pea acreage.

Alderman, Duke of Albany, and Prince Edward are all strains of the Telephone variety, distinguished by darker green pods, a character which the market demands. Many of the Telephones planted are bought as "Dark Podded Telephone," and are more similar to Alderman than to the old type of Telephone, which has light green foliage and pods. Thus Telephone strains embrace practically all of the late peas planted in both counties.

In Erie County there was 63.4 per cent of the acreage planted to Telephone, 17.7 per cent to Duke of Albany, 10.6 per cent to Alderman, 6.1 per cent to Prince Edward, and 2.2 per cent to Hundredfold.

In the Madison area there was no Hundredfold seed planted in 1925 on the 57 farms studied. Telephone made up 85.7 per cent of the late-pea acreage, Alderman 12.6 per cent, and Duke of Albany and Prince Edward 1.1 and 0.6 per cent, respectively.

*Fertilizer.* The average cost of fertilizer used for peas was $7.85 per acre for Erie County, or 9 cents per bushel, and $5.19 per acre for the Madison area, or 4 cents per bushel (table 12). Commercial fertilizer was used by all of the 63 growers in Erie County and by 53 of the 57 growers interviewed in the Madison area.

The common practice in both areas is to drill the fertilizer with the seed.

TABLE 12. USE OF FERTILIZER ON GREEN PEAS, 120 NEW YORK FARMS, 1925

| | Erie County | Madison area | All farms |
|---|---|---|---|
| Number of farms growing peas | 63 | 57 | 120 |
| Number of farms using fertilizer | 63 | 53 | 116 |
| Per cent of farms using fertilizer | 100 | 93 | 97 |
| Number of acres on which fertilizer was used | 347 | 593 | 940 |
| Per cent of land in peas that was fertilized | 100 | 98 | 99 |
| Average pounds of fertilizer used: | | | |
| Per acre fertilized | 437 | 315 | 360 |
| Per acre grown | 437 | 309 | 356 |
| Average cost of fertilizer used: | | | |
| Per acre fertilized | $7.85 | $5.30 | $6.23 |
| Per acre grown | $7.85 | $5.19 | $6.16 |
| Average cost of fertilizer used per bushel of peas | $0.09 | $0.04 | $0.06 |

Since very little extra time is required for this work, all such labor was included with the planting.

The kinds and quantities of fertilizer used in the two areas are shown in tables 13 and 14. In Erie County the 4–8–4 combination was used more than any other formula. Of the total pounds of fertilizer used by the Erie

TABLE 13. KINDS AND QUANTITIES OF FERTILIZER USED ON 63 ERIE COUNTY FARMS, 1925

| Kinds of fertilizer | Number of farms using | Acres of peas on which used | Total pounds applied | Total cost | Per cent of total pounds |
|---|---|---|---|---|---|
| 1–7–9 | 1 | 14.0 | 4,900 | $ 68.70 | 3 |
| 2–8–2 | 1 | 10.0 | 15,000 | 225.00 | 10 |
| 2–8–4 | 1 | 4.0 | 600 | 12.00 | ..... |
| 2–8–10 | 10 | 29.8 | 10,000 | 199.69 | 7 |
| 2–12–2 | 5 | 40.2 | 16,799 | 254.19 | 11 |
| 3–8–4 | 1 | 2.0 | 400 | 7.60 | ..... |
| 3–8–6 | 1 | 5.0 | 3,500 | 65.62 | 2 |
| 3–9–2 | 1 | 3.6 | 1,100 | 19.00 | 1 |
| 3–12–3 | 2 | 13.0 | 5,524.5 | 112.80 | 4 |
| 3–12–5 | 1 | 15.0 | 4,500 | 90.00 | 3 |
| 4–8–4 | 12 | 54.9 | 26,052 | 518.89 | 17 |
| 4–8–5 | 1 | 3.0 | 1,500 | 31.50 | 1 |
| 4–8–6 | 1 | 2.0 | 1,200 | 24.00 | 1 |
| 4–8–7 | 10 | 37.7 | 16,059 | 342.91 | 11 |
| 4–12–4 | 7 | 50.0 | 18,900 | 352.09 | 12 |
| 4–16–4 | 1 | 1.5 | 300 | 7.46 | ..... |
| 5–8–5 | 2 | 13.0 | 5,000 | 108.50 | 3 |
| 5–10–5 | 1 | 2.5 | 1,336 | 30.06 | 1 |
| 5–10–10 | 1 | 2.8 | 1,375 | 30.95 | 1 |
| 16-per-cent superphosphate | 8 | 27.2 | 11,125 | 115.25 | 7 |
| Sheep manure | 3 | 15.7 | 5,700 | 99.50 | 4 |
| Tankage | 1 | 2.5 | 1,000 | 10.00 | 1 |
| Total | ..... | 349.4 | 151,870.5 | $2,725.71 | 100 |

TABLE 14. KINDS AND QUANTITIES OF FERTILIZER USED ON 53 FARMS IN THE MADISON AREA, 1925

| Kinds of fertilizer | Number of farms using | Acres of peas on which used | Total pounds applied | Total cost | Per cent of total pounds |
|---|---|---|---|---|---|
| 0–10–8 | 2 | 27.0 | 5,650 | $ 90.47 | 3 |
| 1–8–4 | 2 | 7.5 | 2,650 | 38.15 | 2 |
| 2–8–3 | 1 | 8.0 | 2,400 | 31.20 | 1 |
| 2–8–4 | 6 | 55.0 | 15,839 | 251.95 | 9 |
| 2–8–7 | 1 | 5.0 | 625 | 10.63 | ..... |
| 2–8–10 | 18 | 104.0 | 30,700 | 545.55 | 16 |
| 2–12–2 | 1 | 20.5 | 12,000 | 201.60 | 6 |
| 2–12–4 | 2 | 23.0 | 6,700 | 136.00 | 4 |
| 2–12–5 | 1 | 12.0 | 3,600 | 54.00 | 2 |
| 3–8–4 | 1 | 12.0 | 3,600 | 72.00 | 2 |
| 3–8–7 | 1 | 0.5 | 100 | 1.80 | ..... |
| 3–8–10 | 2 | 2.5 | 775 | 13.95 | ..... |
| 3–9–5 | 1 | 2.0 | 400 | 8.40 | ..... |
| 4–8–4 | 5 | 91.0 | 26,100 | 517.60 | 14 |
| 4–8–7 | 2 | 103.0 | 27,800 | 562.88 | 15 |
| 4–8–10 | 1 | 6.0 | 1,200 | 28.80 | 1 |
| 4–12–4 | 1 | 20.0 | 6,000 | 120.00 | 3 |
| 4–16–4 | 1 | 12.0 | 3,600 | 88.20 | 2 |
| 5–10–5 | 1 | 7.0 | 6,000 | 120.00 | 3 |
| 16-per-cent super phosphate | 12 | 75.2 | 31,325 | 253.30 | 17 |
| Total | ..... | 593.2 | 187,064 | $3,146.48 | 100 |

County growers, 17 per cent was the 4–8–4. Other kinds used to some extent were 4–12–4, 4–8–7, 2–12–2, 2–8–2, 2–8–10, and 16-per-cent superphosphate (acid phosphate).

In the Madison area a larger proportion of the cheaper grades of fertilizer was used. The fertilizer most commonly used was the 16-per-cent superphosphate, which comprised 17 per cent of the total pounds used. The next most commonly used fertilizers were 2–8–10, 4–8–7, 4–8–4, and 2–8–4.

The quantities of fertilizer used per acre were also less in the Madison area than in Erie County. As shown in table 12, the average quantity used per acre in Erie County was 437 pounds as compared with 309 pounds for the Madison area. The cost per acre and per bushel of peas differed in the same proportion. The costs were $7.85 and $5.19 per acre, and 9 cents and 4 cents per bushel, respectively, for the Erie and Madison areas.

As reported in Bulletin 441 of the Cornell University Agricultural Experiment Station, in 1921 the average application of fertilizer on 138 acres of market peas in the Chenango area was 288 pounds per acre. The cost per acre was $6.57, and the cost per bushel 4 cents. In 1922 the rate of application was 304 pounds, the cost per acre was $5.05, and the cost per bushel was 5 cents, as reported in Bulletin 438 of this station.

In Erie County most of the pea growers are market gardeners with high-priced land and very little livestock, while in the Madison area most of the growers operate on a larger scale, have more manure for their cash crops, and grow the peas on cheaper land. If the Madison growers wish to

increase their returns, they usually find it more profitable to rent additional land than to increase the grade or the quantity of fertilizer used. However, it is very possible that many growers in both areas would find it profitable to use a better grade of fertilizer than they are using.

The great variation in the kinds of fertilizer used also suggests possibilities for lowering costs. If fewer kinds were used, the fertilizer could be purchased in larger quantities cooperatively thru the associations.

*Lime.* Very little lime was used directly on the pea crop in either region. Only 13 growers in Erie County, and 16 in the Madison area, used lime in 1925.

Since only 20 per cent of the total cost of lime was charged to the pea crop, the net charge per acre of pea land was comparatively small. In Erie County the average cost of lime was 32 cents per acre (table 15), or 1 cent per bushel of peas, and in the Madison area it was 22 cents per acre, or less than 1 cent per bushel of peas. The Erie County growers used more lime than did the Madison growers, the quantities being 1.06 tons and 0.77 ton per acre, respectively, for the two areas.

TABLE 15. USE OF LIME ON GREEN PEAS, 120 NEW YORK FARMS, 1925

| | Erie County | Madison area | All farms |
|---|---|---|---|
| Number of farms growing peas | 63 | 57 | 120 |
| Number of farms using lime for peas | 13 | 16 | 29 |
| Per cent of farms using lime for peas | 20.6 | 28.1 | 24.2 |
| Number of acres on which lime was applied | 89.7 | 127.5 | 217.2 |
| Per cent of land in peas that was limed | 25.8 | 21.0 | 22.8 |
| Total tons of ground limestone used for peas | 94.7 | 98.12 | 192.82 |
| Average quantity of lime per acre limed (tons) | 1.06 | 0.77 | 0.89 |
| Tons charged to crop per acre limed | 0.21 | 0.15 | 0.18 |
| Average charge for lime per acre limed | $1.25 | $1.06 | $1.14 |
| Tons of lime used per acre, all farms included | 0.27 | 0.16 | 0.20 |
| Lime charge per acre, all farms included | $0.32 | $0.22 | $0.26 |

Whether a heavier application of lime on peas would pay is very doubtful. The soil in both areas is fairly well supplied naturally with limestone. Only in special sections of poorly drained land are the beneficial effects from the application of lime evident. Most growers feel that lime is not a limiting factor, and that other problems are more important under present conditions.

*Manure.* The average cost of manure per acre was $5.03 (table 16), or 6 cents per bushel of peas, in Erie County, and $1.92 per acre, or 2 cents per bushel of peas, in the Madison area.

In the Madison area, where there is more livestock, the average application of manure per acre manured was 13.4 tons as compared with 9.4 tons for Erie County. The charges per acre, however, were in reverse proportion. In Erie County the charge per acre manured was $28.97 as compared with $16.83 in the Madison area. This difference is what one might expect, since the estimated value of manure per ton would be higher where it is relatively scarce, and lower where it is more abundant.

TABLE 16. USE OF MANURE ON GREEN PEAS, 120 NEW YORK FARMS, 1925

| | Erie County | Madison area | All farms |
|---|---|---|---|
| Number of farms growing peas | 63 | 57 | 120 |
| Number of farms using manure on peas | 15 | 15 | 30 |
| Per cent of farms using manure on peas | 23.8 | 26.3 | 25.0 |
| Number of acres on which manure was used | 60.3 | 69.0 | 129.3 |
| Per cent of land in peas that was manured | 17.4 | 11.4 | 13.6 |
| Total tons of manure used on peas | 567 | 925 | 1,492 |
| Average quantity of manure per acre manured (tons) | 9.4 | 13.4 | 11.5 |
| Average charge for manure per acre manured | $28.97 | $16.83 | $22.49 |
| Tons of manure used per acre, all farms included | 1.63 | 1.53 | 1.57 |
| Manure charge per acre, all farms included | $5.03 | $1.92 | $3.05 |

Manure, like lime, was not applied directly to the pea crop by many growers in either area. Unlike the practice with lime, however, manure is used on nearly all farms, but it is usually applied to the crop preceding peas, such as hay, corn, cabbage, potatoes, or truck crops. For this reason the total cost of the manure was charged to the pea crop, rather than just 40 per cent, the figure used in the cost-account work at this College. Thus the total cost on 25 per cent of the farms was considered to be approximately equivalent to the proper charge for residual effect, if it could be

TABLE 17. LABOR REQUIREMENTS PER ACRE OF MARKET PEAS ON 120 NEW YORK FARMS, 1925

| | Erie County | Madison area | All farms |
|---|---|---|---|
| Growing: | | | |
| Man hours | 9.6 | 12.5 | 11.5 |
| Horse hours | 12.8 | 18.7 | 16.5 |
| Tractor hours | 3.0 | 2.6 | 2.7 |
| Equipment hours | 12.8 | 18.7 | 16.5 |
| Picking: | | | |
| Man hours | 156.5 | 209.6 | 190.2 |
| Harvesting vines: | | | |
| Man hours | 1.8 | 0.4 | 0.9 |
| Horse hours | 2.1 | 0.4 | 1.1 |
| Equipment hours | 2.1 | 0.4 | 1.1 |
| Other harvesting: | | | |
| Man hours | 10.0 | 8.6 | 9.1 |
| Horse hours | ..... | 0.4 | 0.2 |
| Automobile or truck miles | 6.0 | 3.8 | 4.6 |
| Equipment hours | ..... | 0.4 | 0.2 |
| Marketing: | | | |
| Man hours | 4.2 | 2.9 | 3.4 |
| Horse hours | ..... | 1.9 | 1.2 |
| Automobile or truck miles | 30.7 | 7.5 | 15.9 |
| Equipment hours | ..... | 1.9 | 1.2 |
| Total: | | | |
| Man hours | 182.1 | 234.0 | 215.1 |
| Horse hours | 14.9 | 21.4 | 19.0 |
| Tractor hours | 3.0 | 2.6 | 2.7 |
| Automobile or truck miles | 36.7 | 11.3 | 20.5 |
| Equipment hours | 14.9 | 21.4 | 19.0 |

determined. This method, of course, results in a charge which is too high for the growers applying manure directly to peas, and too low for those using no manure directly on this crop; but it gives an average figure for cost of production which is very close to the true cost.

The question whether to use more or less manure per acre on peas is mostly a problem of prospective gains. When prices for peas are at the average or higher, it probably pays to give the pea land more than the average application of manure. However, most growers think that better results are obtained by treating the crop immediately preceding peas, than by direct application to the pea crop. This gives the manure time to decompose and become available for plant food. Also, too much manure has a tendency to overstimulate growth of vines without the proportionate number of pods. Hence, manure which is applied directly should preferably be that which is partly decomposed, put on lightly and scattered well.

*Labor.* The average cost of man labor in growing peas was $4.16 per acre, or 5 cents per bushel, in Erie County, and $4.64 per acre, or 4 cents per bushel, in the Madison area.

The labor required in growing the peas varied considerably in the two areas. In Erie County, where the peas are not cultivated, the man hours averaged 9.6 hours per acre (table 17). In the Madison area, 12.5 hours per acre were required to grow the peas. The cultivating alone required 3.9 hours per acre.

TABLE 18. AVERAGE HOURS PER ACRE REQUIRED TO PERFORM VARIOUS OPERATIONS ON THE PEA CROP, 120 NEW YORK FARMS, 1925

| Operations | Number of growers performing operations | Number of times performed | Man hours | Horse hours | Tractor hours |
|---|---|---|---|---|---|
| Erie County (63 farms): | | | | | |
| Plowing | 58 | 0.9 | 3.1 | 3.8 | 1.3 |
| Disking | 37 | 1.1 | 1.1 | 0.3 | 0.9 |
| Harrowing | 61 | 2.3 | 1.5 | 1.7 | 0.7 |
| Drilling | 63 | 3.6 | 1.6 | 3.0 | ..... |
| Cultivating | 4 | 0.1 | 0.2 | 0.2 | ..... |
| Planting | 8 | 0.2 | 0.1 | 0.2 | ..... |
| Rolling | 22 | 0.5 | 0.4 | 0.8 | ..... |
| Hauling and spreading lime | 13 | ..... | 0.2 | 0.3 | ..... |
| Hauling and spreading manure | 16 | ..... | 1.1 | 1.8 | ..... |
| Other operations | 23 | ..... | 0.1 | 0.1 | ..... |
| Total | ..... | ..... | 9.4 | 12.2 | 2.9 |
| Madison area (57 farms): | | | | | |
| Plowing | 56 | 1.0 | 3.9 | 5.9 | 1.0 |
| Disking | 32 | 1.0 | 0.8 | 0.4 | 0.7 |
| Harrowing | 56 | 1.3 | 1.6 | 1.5 | 0.9 |
| Drilling | 57 | 4.0 | 1.3 | 2.6 | ..... |
| Cultivating | 50 | 0.9 | 3.9 | 6.4 | ..... |
| Rolling | ..... | 0.3 | 0.1 | 0.1 | ..... |
| Hauling and spreading lime | 5 | ..... | 0.1 | 0.2 | ..... |
| Hauling and spreading manure | 11 | ..... | 0.9 | 1.8 | ..... |
| Total | ..... | ..... | 12.6 | 18.9 | 2.6 |

The number of hours required to perform the various operations on the pea crop are given in table 18. The greater amount of time required per acre to grow the peas in the Madison area was largely due to the extra work of cultivating, and was due also to the fact that more of the work was done with horses in the Madison area than in Erie County.

The distribution of the labor required to produce peas in the two areas is shown in table 19. In Erie County the planting begins and finishes about ten days earlier than in the Madison area. The harvesting also starts one or two weeks earlier, and is practically finished a month before the Madison growers are thru. In 1925, about half of the Erie peas were marketed before July 4 while only about 15 per cent of the Madison peas were shipped as early as that date. By July 31, 96 per cent of the Erie peas had been shipped while 34 per cent of the Madison peas were yet to be harvested.

TABLE 19. LABOR DISTRIBUTION IN THE PRODUCTION OF MARKET PEAS IN THE ERIE AND MADISON AREAS, NEW YORK, 1925

| Ten-day periods | Erie County, per cent of total hours of labor on peas | Madison area, per cent of total hours of labor on peas |
|---|---|---|
| March 11 to 20 | 1.7 | ..... |
| March 21 to 31 | 4.6 | 5.1 |
| April 1 to 10 | 11.5 | 9.6 |
| April 11 to 20 | 9.8 | 7.4 |
| April 21 to 30 | 7.2 | 5.9 |
| May 1 to 10 | 7.3 | 4.9 |
| May 11 to 20 | 3.9 | 7.6 |
| May 21 to 31 | 2.1 | 2.8 |
| June 1 to 10 | 1.3 | 2.3 |
| June 11 to 20 | 9.7 | 3.3 |
| June 21 to 30 | 10.5 | 4.6 |
| July 1 to 10 | 9.0 | 8.8 |
| July 11 to 20 | 10.9 | 11.0 |
| July 21 to 31 | 8.6 | 9.6 |
| August 1 to 10 | 1.1 | 9.1 |
| August 11 to 20 | 0.7 | 5.9 |
| August 21 to 31 | 0.1 | 1.7 |
| September 1 to 10 | ..... | 0.4 |
| Total | 100.0 | 100.0 |

The practice of planting in succession over a period of nearly three months, distributes the labor over five months. The first ten days in April and the middle ten days in July were the busiest periods in both areas in 1925. In Erie County 11.5 per cent of all the work on peas was done from April 1 to 10, and 10.9 per cent from July 11 to 20. In the Madison area 9.6 per cent of all the work on peas was done from April 1 to 10, and 11 per cent from July 11 to 20.

The quantities of important items used in producing peas are given in table 20.

TABLE 20. QUANTITIES OF IMPORTANT ITEMS USED IN THE PRODUCTION OF MARKET PEAS, 120 NEW YORK FARMS, 1925

| Item | Erie County, amount per acre | Madison area, amount per acre |
|---|---|---|
| Bushels of seed used | 3.41 | 2.06 |
| Pounds of fertilizer used | 437 | 309 |
| Tons of lime used | 0.27 | 0.16 |
| Tons of manure used | 1.63 | 1.53 |
| Hours of man labor, picking not included | 25.6 | 24.4 |
| Hours of man labor, picking included | 182.1 | 234.0 |
| Hours of horse labor | 14.9 | 21.4 |
| Hours tractor used | 3.0 | 2.6 |
| Automobile and truck miles | 36.7 | 11.3 |

The labor rates were higher in Erie County than in the Madison area, as is shown in table 21.

TABLE 21. LABOR AND EQUIPMENT RATES FOR GROWING PEAS, 120 NEW YORK FARMS, 1925

| | Erie County | Madison area | All farms |
|---|---|---|---|
| Number of farms growing peas | 63 | 57 | 120 |
| Man labor per hour | $0.43 | $0.37 | $0.39 |
| Horse labor per hour | $0.22 | $0.19 | $0.20 |
| Use of tractor per hour | $1.76 | $1.54 | $1.62 |
| Use of equipment per hour | $0.10 | $0.10 | $0.10 |

The variation in the rate per hour of man labor in growing peas is given in table 22. In Erie County the rate ranged from 25 cents to 65 cents. In the Madison area the range was from 25 cents to 50 cents. The common-

TABLE 22. VARIATION IN THE RATE PER HOUR FOR MAN LABOR IN GROWING PEAS, 120 NEW YORK FARMS, 1925

| Rate per hour | Erie County | | Madison area | |
|---|---|---|---|---|
| | Number of farms | Per cent of total | Number of farms | Per cent of total |
| (Cents) | | | | |
| 25 | 1 | 1.6 | 5 | 8.8 |
| 30 | 2 | 3.2 | 9 | 15.8 |
| 35 | 12 | 19.0 | 12 | 21.0 |
| 40 | 19 | 30.1 | 28 | 49.1 |
| 45 | 2 | 3.2 | ..... | ..... |
| 50 | 26 | 41.3 | 3 | 5.3 |
| 65 | 1 | 1.6 | ..... | ..... |
| Total | 63 | 100.0 | 57 | 100.0 |

est rate in Erie County was 50 cents per hour, reported by 26 growers. Rates of 40 cents and 35 cents per hour were reported by 19 and 12 growers, respectively. In the Madison area the commonest rate was 40 cents per hour, reported by 28 growers, with 35 cents per hour next, reported by 12 growers.

This difference in rate per hour in the two regions is due to their location relative to large cities. The pea-growing area in Erie County is in a market-garden section near Buffalo, where opportunities for work at city wages are an important factor. Growers hiring labor in this section must meet this competition. The Madison area, on the other hand, has no competition problem other than that of regular farm work, which has been relatively less remunerative than city work since 1920.

The development in the use of labor-saving machinery has been even greater in Erie County than in the Madison area. Trucks were employed entirely in 1925 to draw the peas to market, where horses were used a decade ago. Many of the farmers interviewed told how they used to spend most of the day taking a load of peas into Buffalo with a team over unimproved roads.

The greatest need now for labor-saving machinery is in the picking. Approximately 90 per cent of the man hours spent on the crop are used in this one operation. This work is mostly all hired, and hence it makes up a considerable proportion of the cash outlay. In addition to the cost of picking, at 40 cents per bushel, most growers hired a field boss extra at from $3 to $5 per day. There are also the other expenses of getting the pickers to and from cities and fields, as well as the housing and caring for them generally.

*Horse labor.* The average cost of horse labor in growing peas was $2.79 per acre, or 3 cents per bushel, in Erie County, and $3.52 per acre, or 3 cents per bushel, in the Madison area.

The horse hours also were less in Erie County than in the Madison area. In the growing operations, 12.8 horse hours per acre were required in Erie County and 18.7 horse hours in the Madison area (table 17, page 26). This is explained, as with the man labor, by the practice of less cultivation in the former region than in the latter.

The cost of keeping horses, however, was greater in Erie County, and so the rate per hour was higher. As shown in table 21 (page 29), the average charge for horse labor in 1925 was 22 cents and 19 cents, respectively, for the Erie and Madison areas.

*Tractor cost.* The average cost of tractor labor in growing peas was $5.22 per acre, or 6 cents per bushel, in Erie County, and $3.97 per acre, or 3 cents per bushel, in the Madison area.

Tractors, tho used to a greater degree in Erie County, cost more per hour there. The average rate for the 32 farms on which tractors were used in this region was $1.76 per hour, as compared with $1.54 per hour for the 24 Madison farms. The tractor hours per acre of peas were 3.0 and 2.6, respectively, for the two regions.

The gradual replacement of horses by tractors and trucks has been very marked in the past ten years. According to an earlier study of market peas in Madison County,[4] in 1915 there were no cost items listed for

[4] A study of market peas in Madison and Otsego Counties, New York. By C. F. Sarle. Department of Agricultural Economics and Farm Management, New York State College of Agriculture. 1916.

either tractor or truck, and 50 horse hours per acre were required for the production of the crop as compared with a total of 21.4 horse hours per acre in 1925 (table 17).

*Equipment.* The equipment charge in 1925 was $1.28 per acre, or 1 cent per bushel, in Erie County, and $1.87 per acre, or 2 cents per bushel, in the Madison area.

Use of equipment was assumed to be in proportion to the number of horse hours, and was charged to the pea crop at 10 cents per horse hour. This method approximates the average cost for the group, since the 10 cents per horse hour was determined from the records of cost-account farms using about the same proportion of horses and tractors as was used on the farms growing market peas in 1925.

*Interest.* The interest charge in growing peas was 57 cents per acre, or 1 cent per bushel, in Erie County, and 36 cents per acre, or less than 1 cent per bushel, in the Madison area. The capital invested in this enterprise is comparatively small and the season of production is short. Most of the cost outlay comes just at harvest time, and, since the peas are sold for cash immediately, the interest cost is relatively small as compared with that for many other crops.

*Use of land.* The charge for use of land was more than twice as much in Erie County as in the Madison area. The average charge per acre for use of land (table 23) was $18.08, or 20 cents per bushel of peas, in Erie County, and $7.48, or 6 cents per bushel of peas, in the Madison area. This was due to the higher value per acre of the pea land in Erie County ($249) than in the Madison area ($90).

TABLE 23. VALUE PER ACRE AND CHARGES FOR USE OF LAND IN PEAS, 120 NEW YORK FARMS, 1925

| | Erie County | Madison area | All farms |
|---|---|---|---|
| Acres of owned land | 323.4 | 528.8* | 852.2* |
| Value of owned land | $80,576 | $47,368 | $127,944 |
| Value per acre of owned land | $249 | $90 | $150 |
| Acres of rented land | 24 | 75 | 99 |
| Charge per acre of owned land | $18.75 | $7.44 | $11.73 |
| Charge per acre of rented land | $9.04 | $7.93 | $8.20 |
| Average charge per acre for use of land | $18.08 | $7.48 | $11.34 |

* Two crops of peas were grown on 2 acres.

There were 24 acres of peas on rented land in Erie County, or 6.9 per cent of all the pea acreage on the 63 farms studied. In the Madison area there were 75 acres of rented land, or 12.4 per cent of the total pea acreage. In both regions some of the peas were grown by tenants or under contract, which is really a form of land rental. In the tabulations, however, these farms were included in the owned-farms group in order to make the costs per acre comparable.

*Cost of picking*

The average cost of picking, in 1925, was $35.07 per acre, or 40 cents per bushel, in Erie County, and $46.44 per acre, or 38 cents per bushel, in

the Madison area. The cost of picking on the 120 farms amounted to 33.3 per cent of the total cost of production, excluding shipping and selling cost.

If more than two or three acres of peas are grown, it is almost necessary for each grower to have his own gang of pickers. The peas ripen quickly and must be picked and shipped on the day that they are ready. Delays due to inability to obtain pickers have proved very costly to many growers.

This problem is handled by large growers in two ways. First, the peas are planted in succession, from one to five acres at a time, and the plantings are from a week to two weeks apart. This results in the peas ripening at the rate of about two to four acres a week, thus providing fairly continuous work for a relatively small gang of pickers. It would be impossible to get all fields picked at the same time.

The second way is to get several families of Italians from the city to come and live at the farm during the entire season. Tenant houses, shacks, and sheds of various kinds are fitted as temporary quarters at extra cost to the grower. Stoves, fuel, and other incidentals are also furnished free to the pickers. Considerable produce from the farm is used by these families during the season, at little or no cost to them. The growers are required also to carry workmen's compensation insurance. They usually pay the cost of transportation one way from the city to the farm, and, in addition, many of them pay an agent $1 for each picker as an employment fee. Furthermore, since most of these pickers cannot speak English, it is necessary to hire a field boss who can act also as an interpreter.

In table 24 is shown the number of growers employing the various kinds of pickers in each area. In the Madison area two-thirds of the growers were able to use local pickers, one-fourth Italian pickers, and the remainder hobos and Polish pickers. In Erie County, however, half of the growers had Italian pickers, about one-third used local help, and the remainder used Polish pickers. In the latter area, other crops, such as beans and

TABLE 24. KINDS OF PICKERS USED TO PICK THE MARKET PEAS ON 102 NEW YORK FARMS, 1925

| | Erie County | Madison area | All farms |
|---|---|---|---|
| Number of farms | 51 | 51 | 102 |
| Number of farms using local or family pickers | 19 | 34 | 53 |
| Number of farms using Italian pickers | 28 | 12 | 40 |
| Number of farms using Polish pickers | 4 | 2 | 6 |
| Number of farms using hobos | 0 | 3 | 3 |

berries, also are picked by hand, so that many of the growers had gangs for the whole season when their pea acreage would really not have justified it. Other growers, too, were able to make arrangements for their neighbor's gang of pickers without the trouble, and often without any of the expense, of getting and keeping them. This practice, in most cases, worked to the advantage of both parties. The one who had the pickers was able to make a better bargain with them by the assurance of more continuous work thruout the season, while the other grower got his peas picked at a low cost per bushel.

This arrangement, however, does not always work out so well. Frequently the peas all ripen at about the same time, due to a combination of weather conditions, so that the grower who has the pickers naturally gets his peas picked first and his neighbor's are picked later. This, of course, results in heavy losses to the one grower unless he can get help elsewhere, which is often very costly if not practically impossible.

The cost of picking has doubled since 1915.[5] At that time the average cost was 20 cents per bushel in the region studied, while in 1925 the average for 120 farms was 41 cents.

The ratio of the picking cost to the total cost, however, has not changed much. In 1915 the cost of picking was 34.5 per cent of the total cost of production, including express charges and commissions. In 1925 the picking cost made up 33.3 per cent of the total net cost.

A higher rate is usually paid for early varieties than for late varieties, due to the higher yield per acre of the late varieties, enabling the pickers to pick more per day. In Erie County in 1925 the common rates for early varieties were 45 and 50 cents per bushel, while the late varieties were picked mostly for 35, 40, and 45 cents. In the Madison area the rate for early varieties was 40 cents per bushel on practically all farms. The rates for late varieties, however, ranged from 30 to 40 cents per bushel.

Occasionally a grower pays a bonus for picking on Sundays and holidays, or for exceptionally careful work. Some growers pay their field boss a bonus on every bushel of peas that sells for the top price of that day due to the better filling of the baskets or to a more careful watch for "slabs," vines, and other objectionable matter that affects the selling price. Growers following such practices say that the high price received for a better pack more than pays them for the extra cost.

The method of paying the pickers varies in the different sections and with small and large growers. In the Madison area, the growers of large acreages usually have tickets, with numbers on both sides, in which the field boss can easily punch a hole for each bushel or half bushel picked. The numbers are so arranged that the same number on each side is punched at the same time, to avoid errors and duplications. Where Italian families are employed, they usually pick with the family as a unit, one ticket serving for the whole family. When different rates of pay are used, such as for early and late varieties, differently colored tickets are used to indicate the distinction. At the end of the season these tickets are turned in for settlement. Each ticket having a definite number of punches on it represents a given sum of money. This greatly facilitates the payment where many children of various ages and degrees of efficiency are picking, and where the work is done at irregular hours. It is particularly helpful where the pickers do not understand the English language.

In Erie County, most of the peas when picked are put in bags and the pickers are paid by the pound. Each day at quitting time the field boss or the grower weighs the peas picked by each family separately, and gives credit accordingly on a record which he keeps, sometimes by punching a ticket similar to that used in Madison County. This method requires more time to do the weighing, but is a more nearly accurate measurement of

[5] A study of market peas in Madison and Otsego Counties, New York. By C. F. Sarle. Department of Agricultural Economics and Farm Management, New York State College of Agriculture. 1916.

the day's accomplishment. The bushel measure is a variable quantity, depending on how strict the field boss is in checking on the pickers.

Growers with from one to six acres usually can get local pickers, women and children from the near-by villages. With such pickers the ticket method of payment is used the same as with Italians by some growers, except that each individual has a ticket. Most of the growers with small acreages do not have enough picking to justify using tickets, and merely keep track of the earnings by some simple record.

Since the pickers are paid by the bushel or the pound, very few growers keep any record of the hours of work. It is rather difficult, too, to determine the number of man hours used in picking an acre of peas, because there are so many children of varying ages and degrees of efficiency. Besides, the work is not regular, nor do all the pickers work continuously while in the field.

The data reported by 65 growers who kept a fairly accurate record of the number of days of picking, the average hours of work per day, and the average number of pickers per day, are given in table 25. The averages

TABLE 25. SUMMARY OF HOURS OF PICKING AND BUSHELS PICKED ON 65 NEW YORK FARMS, 1925

| | Erie County | Madison area | All farms |
|---|---|---|---|
| Number of farms | 39 | 26 | 65 |
| Total hours of picking | 33,658 | 57,896 | 91,554 |
| Total bushels picked | 16,550 | 43,686 | 60,236 |
| Bushels picked per hour | 0.49 | 0.76 | 0.66 |
| Hours required per bushel | 2.04 | 1.32 | 1.52 |

show that 2.04 hours were required to pick a bushel of peas in Erie County, while only 1.32 hours were required in the Madison area. Thus, a worker picked 0.76 bushel of peas per hour in the Madison area, but only 0.49 bushel per hour in Erie County. This difference is due to the higher yields per acre obtained in the Madison area in 1925 as compared with the yields in Erie County — 121 bushels per acre in the former region, and 89 bushels per acre in the latter — and to the method of planting. When the peas yield well, and are free from weeds, the better pickers can often double the amounts picked on poorer fields.

With an average of from $\frac{1}{2}$ to $\frac{2}{3}$ bushel of peas per hour, a picker would harvest from 4 to 6 bushels in an eight-hour day. This average, of course, includes the work of men, women, and children — a rather varied group. Estimates made by a number of growers place the amount picked by the children at from 1 to 3 bushels per day, and the amount picked by adults at from 5 to 10 bushels per day. Some growers were asked what their best pickers could do, and what was the best record per day for the 1925 season. Those reporting showed a range of from 10 to 25 bushels. There was only one report for 25 bushels picked by one individual in one day. That record was made by a man picker near Morrisville, Madison County. A number of the woman pickers, however, were reported at 20 bushels per day as a high mark.

*Harvesting costs other than picking*

In harvesting costs other than picking are included such items as the cost of getting the pickers to and from cities, the cost of getting them to and from the fields, the cost of housing and caring for them, the cost of the field boss and the tender, the cost of drawing peas to the barn or to shade, and the cost of harvesting the vines.

Harvesting costs other than picking were higher in Erie County than they were in the Madison area because a greater proportion of the peas were picked by laborers brought from a distance. This necessitated more trips to cities, and more expensive housing, wood, and supplies, than where local pickers were available.

The labor required to harvest the vines (table 17, page 26) amounted to 1.8 man hours and 2.1 horse hours per acre at a cost of $1.32 per acre in Erie County, and 0.4 man hour and 0.4 horse hour in the Madison area, which, with the use of the tractor, amounted to 25 cents per acre. The other harvesting costs, except picking, amounted to 10 man hours and 6 truck miles per acre in Erie County. The 57 Madison farms required 8.6 man hours, 0.4 horse hour, 0.4 equipment hour, and 3.8 truck miles. The total of these charges averaged $10.78 per acre, or 12 cents per bushel, in Erie County, and $7.33 per acre, or 6 cents per bushel, in the Madison area. These averages, however, are for all farms, some of these using family or local pickers, some employing hobos, and some employing Italian or Polish pickers.

*Marketing costs*

Marketing costs include all labor and expense of getting the peas to the shipping station, the cost of baskets and containers, association charges, freight or express charges, the cost of cartage at the terminal market, and selling charges made by the commission agencies.

In Erie County, where most of the growers belong to the Erie County Growers' and Shippers' Association, Inc., and where the peas are pooled daily, all these costs, except the growers' trucking expense, were deducted by the association and only the net returns were forwarded to the growers. In order to make the total cost of production comparable in the two areas, these marketing costs were recalculated and added to the other costs, and the adjusted figure for total cost was used. In calculating this adjusted cost, an average charge for transportation, cartage, and icing, weighted according to the amounts shipped to various markets, was made. A flat association charge of 6 cents per bushel was used, and the commission charges were based on the average selling price of each grower's sales and the commission rate in each market weighted according to the percentage of the total association shipments going to each market.

By this method of recomputing the marketing costs, the results do not come out exactly right for any individual grower, for his peas may all have gone to some particular market; but it gives the costs for the entire group, resulting in averages that are comparable to marketing costs found in the Madison area.

In Erie County the growers had to travel much farther, and so the cost of hauling was greater, tho the yields per acre were lower, than in the Madison area. The number of trips to the various shipping stations, and

the miles traveled to each, are shown in table 26. For Erie County the average number of trips per acre was 1.29, the number of miles traveled

TABLE 26. DISTANCES TO SHIPPING STATIONS FROM 120 NEW YORK FARMS, 1925

| Stations | Number of farmers hauling* | Average distance to station | Number of trips made | Total distance traveled |
|---|---|---|---|---|
| Erie County: | | (Miles) | | (Miles) |
| To Orchard Park | 54 | 10.6 | 329 | 6,993 |
| To Buffalo | 22 | 17.6 | 100 | 3,511 |
| To other stations | 2 | 4.8 | 18 | 174 |
| To all stations | ..... | 11.9 | 447 | 10,678 |
| Madison area: | | | | |
| To main station | 56 | 1.8 | 1,053 | 3,903 |
| To other stations | 10 | 3.1 | 184 | 1,149 |
| To all stations | ..... | 2.0 | 1,237 | 5,052 |
| To all stations | ..... | 4.7 | 1,684 | 15,730 |

* Some growers ship their peas from more than one station.

per acre was 30.7, and the total hauling cost was $4.95 per acre (table 27). In the Madison area, 2.04 trips per acre were required, 8.34 miles were traveled per acre, and the total cost of hauling was $2.48 per acre.

TABLE 27. COST OF HAULING MARKET PEAS TO SHIPPING POINT, 120 NEW YORK FARMS, 1925

| | Erie County | Madison area | All farms |
|---|---|---|---|
| Number of farms | 63 | 57 | 120 |
| Acres of peas per farm | 5.51 | 10.63 | 7.94 |
| Yield per acre (bushels) | 89 | 121 | 109 |
| Number of trips per acre | 1.29 | 2.04 | 1.77 |
| Number of miles traveled per acre | 30.7 | 8.34 | 16.5 |
| Total hauling cost per acre | $4.95 | $2.48 | $3.38 |
| Total hauling cost per bushel | $0.056 | $0.020 | $0.031 |

In Erie County there was an average of 4.2 man hours and 30.7 truck miles per acre for marketing, as compared with 2.9 man hours, 1.9 horse hours, 1.9 equipment hours, and 7.5 truck miles, per acre required in the Madison area (table 17, page 26). The total marketing cost was $62 per acre, or 70 cents per bushel, in Erie County, and $88 per acre, or 73 cents per bushel, in the Madison area.

The cost of baskets varied in the two regions. In Erie County the association purchased the baskets for all its members, and deducted 15.5 cents per basket used. This was the approximate cost wholesale to the association, being 2 or 3 cents per basket cheaper than the retail price to other growers.

Peas sold in Buffalo were put in $1\frac{1}{2}$-bushel bags. Usually the grower arranged to have the bags returned when the peas were sold, and so there

was practically no extra expense chargeable to peas for the part of the crop marketed at Buffalo.

In the Madison area, growers who shipped thru either of the associations procured their baskets at a lower rate than those who shipped independently. The common retail price in 1925 was $2 per dozen delivered, where the growers lived conveniently near the basket factory. By special arrangements of payment, delivery, or quantity purchased, baskets were obtained by some growers at $1.80 and $1.90 per dozen in 1925.

For 1926, the Madison County Basket Corporation, at Hamilton, started prices at $1.60 per dozen at the factory in carload lots of 300 dozen, this being the minimum quantity sold direct to growers. By July of that year, prices quoted by dealers were about $2 per dozen. Under present costs of labor, wood, and other items entering into the manufacture of the baskets, officers of the basket corporation estimate that growers will be able to purchase their supplies in the future for about $1.75 per dozen.

In Erie County the Acme Veneer Packing Company, at Orchard Park furnished most of the baskets used in that area. They recommend the round-bottom bushel basket, the one now used in both areas. They say it is superior in strength and durability, and cheaper than other types. The price quoted by this company for 1926, to the Erie County Growers' and Shippers' Association, was $1.45 per dozen net. With other types of cover, prices ranged from $1.50 early in the season to $1.75 later, f. o. b. factory with a 2-per-cent cash discount.

In 1915 baskets were not used. All peas were shipped in bushel bags. The bags sold for approximately 10 cents each at that time. Bags are still used in Otsego County and on Long Island. Most bags used at the present time, however, hold only four-fifths of a bushel of peas. The buyers on the New York market seem to prefer the bushel baskets to the bags. The commission agencies say the peas can be seen more easily, and, as a result, sell for enough more to justify the extra expense of a better package.

The 6 cents per bushel association charge made in 1925 for all peas shipped thru the Erie County Growers' and Shippers' Association, Inc., amounted to $1449, or an average cost of $4.17 per acre of peas. For the 57 farms in the Madison area, the association charges amounted to $1490, or an average cost of $2.46 per acre of peas. These charges, of course, were costs for only those growers belonging to the various associations. In Erie County, 50 of the 63 growers interviewed shipped cooperatively, and in the Madison area, 14 of the 57 growers.

The express rate for most of the Madison area was 30.6 cents per bushel, while the freight cost varied from 18 to 25 cents per bushel depending on the number of baskets in a car and the cost of icing. Besides the freight charge there is an additional expense for icing when the peas are shipped by freight. In Erie County this amounted to $25.50 extra per car, for 5 tons of ice at $5.10 per ton.

The city cartage was 8 cents per bushel in New York, and 3 cents in other markets except Philadelphia, where there was no direct charge. If peas are shipped by express to New York, the express company will deliver them to the selling agency's place of business without any additional charge. But delays are so frequent when the peas are handled in this way that the selling agencies usually have their regular trucks take the peas

from the express station as soon as they come in, so that they will have them ready for the early market. The practice costs the grower 8 cents per bushel, but this is apparently a necessary cost.

The selling commission was 10 per cent of the wholesale price to independent shippers in New York City, and 7 per cent to cooperative marketing associations. The commission charge for cooperatives in 1925 was 10 per cent in Pittsburgh, Washington, and Cleveland, 8 per cent in Baltimore, and 7 per cent in Philadelphia, Boston, and St. Louis.

All of these purely marketing costs are paid out of the sales by the commission firms, are indicated on the bill of sale, and are deducted from the check given to the grower. Where the marketing is done by a cooperative association, the returns are usually sent to the manager of the association, who does the clerical work of paying the individual growers. In this way the commission firms are relieved of much office work, and the association finds it a convenient opportunity to collect the association fee and facilitate pooling operations as carried on by the Erie County Growers' and Shippers' Association at Orchard Park.

The Associated Pea Growers of Madison County, at Morrisville, follow a different plan. Arrangements have been made with the commission firms to send checks to all growers direct, with all charges deducted, and at the end of the season a settlement is made with the manager for the difference between the regular 10-per-cent charge to growers and the 7-per-cent agreement. This relieves the association manager of considerable work. However, there are probably more chances for disagreements and irregularities with this arrangement.

Miscellaneous costs of marketing include all extra cash outlays that did not properly come under any of the items discussed above. The total for the 63 Erie farms in 1925 was $12, or 3 cents per acre. For the 57 Madison farms the miscellaneous costs totaled $194.84, or 32 cents per acre.

## *Returns*

### *Sales of peas*

The gross sales from the market peas on 120 farms in 1925 are shown in the summary of costs and returns (table 31, page 41). In Erie County the gross sales averaged $226 per acre, with an average price of $2.55 per bushel. For the Madison area these averages were $272 per acre and $2.25 per bushel.

The higher price per bushel received by the Erie growers is due to two conditions. First, peas can be planted from a week to two weeks earlier in Erie County than in the Madison area, and hence they come on the market a little ahead of the Madison peas (tables 28 and 29.) As a result, more of the Erie peas get the advantage of the high prices paid for the first New York peas on the market. The other reason for the higher price in Erie County in 1925 is the very low prices received by the Madison growers during the latter part of that season. There was so much rain in August and September that most of the peas blighted badly, causing the prices to fall just at the time when prices usually work up to a higher level, more nearly comparable to prices received for early peas. This condition was further exaggerated by competition with fancy-quality peas from Colorado, a situation not previously experienced by the Madison growers.

TABLE 28. VARIATION IN THE TIME OF PLANTING PEAS, 119 NEW YORK FARMS, 1925

| Planting period | Erie County | | Madison area | |
|---|---|---|---|---|
| | Acres | Per cent of total | Acres | Per cent of total |
| March 11 to 20 | 11.75 | 3.4 | ..... | ..... |
| March 21 to 31 | 31.90 | 9.2 | 58.0 | 10.2 |
| April 1 to 10 | 80.38 | 23.1 | 110.0 | 19.2 |
| April 11 to 20 | 67.50 | 19.5 | 84.16 | 14.7 |
| April 21 to 30 | 50.15 | 14.4 | 67.92 | 11.9 |
| May 1 to 10 | 50.53 | 14.6 | 56.75 | 9.9 |
| May 11 to 20 | 27.30 | 7.9 | 86.67 | 15.2 |
| May 21 to 31 | 14.67 | 4.2 | 31.50 | 5.5 |
| June 1 to 10 | 8.98 | 2.6 | 25.50 | 4.5 |
| June 11 to 20 | 3.95 | 1.1 | 37.75 | 6.6 |
| June 21 to 30 | 0.25 | ..... | 5.50 | 1.0 |
| July 1 to 10 | ..... | ..... | 7.50 | 1.3 |
| Total | 347.36 | 100.0 | 571.25 | 100.0 |

TABLE 29. VARIATION IN THE TIME OF SHIPPING PEAS, 119 NEW YORK FARMS, 1925

| Shipping period | Erie County | | Madison area | | All farms | |
|---|---|---|---|---|---|---|
| | Bushels | Per cent of total | Bushels | Per cent of total | Bushels | Per cent of total |
| June 1 to 10 | 21 | 0.1 | ..... | ..... | 21 | ..... |
| June 11 to 20 | 5,474 | 18.3 | ..... | ..... | 5,474 | 5.7 |
| June 21 to 30 | 6,305 | 21.1 | 5,292 | 8.1 | 11,597 | 12.1 |
| July 1 to 10 | 5,363 | 17.9 | 10,808 | 16.4 | 16,171 | 16.9 |
| July 11 to 20 | 6,561 | 21.9 | 14,445 | 22.0 | 21,006 | 22.0 |
| July 21 to 31 | 5,061 | 16.9 | 12,588 | 19.2 | 17,649 | 18.6 |
| August 1 to 10 | 649 | 2.2 | 11,882 | 18.1 | 12,531 | 13.1 |
| August 11 to 20 | 417 | 1.4 | 7,796 | 11.9 | 8,213 | 8.6 |
| August 21 to 31 | 51 | 0.2 | 2,303 | 3.5 | 2,354 | 2.4 |
| September 1 to 10 | ..... | ..... | 542 | 0.8 | 542 | 0.6 |
| Total | 29,902 | 100.0 | 65,656 | 100.0 | 95,558 | 100.0 |

Despite the higher prices received by the Erie growers, the gross sales per acre averaged higher in the Madison area because of the greater yield per acre received by the Madison farmers.

*Miscellaneous returns*

The vines, if not too badly damaged by the pickers or by wet weather, are raked up in piles, hauled into the barn, and fed to cows or sheep. The miscellaneous returns consisted mostly in the value of the vines fed to stock. Some rebates on association charges received by a few growers after all reports were in, were also included under miscellaneous receipts.

In table 30 are given the data on receipts from vines harvested. In Erie County the vines were saved from 199.4 acres of peas with an average of 0.54 load per acre valued at $6.16 per load. This amounted to an average of $1.91 per acre, or 2 cents per bushel of peas, for the 63 farms.

TABLE 30. VALUE AND DISPOSAL OF PEA VINES ON 120 NEW YORK FARMS, 1925

| | Erie County | Madison area | All farms |
|---|---|---|---|
| Number of farms growing peas | 63 | 57 | 120 |
| Number of farms on which vines were saved | 33 | 19 | 52 |
| Per cent of farms on which vines were saved | 52.4 | 33.3 | 43.3 |
| Acres of peas from which vines were saved | 199.4 | 101.2 | 300.6 |
| Total number of loads saved and fed to stock | 107.5 | 89.0 | 196.5 |
| Average number of loads per acre saved | 0.54 | 0.88 | 0.65 |
| Total value of vines saved and fed to stock | $662 | $448 | $1,110 |
| Average value of vines per load | $6.16 | $5.03 | $5.65 |
| Average value of vines per acre saved | $3.32 | $4.43 | $3.69 |
| Number of loads saved per acre of peas | 0.31 | 0.15 | 0.21 |
| Value of vines saved per acre of peas | $1.91 | $0.74 | $1.16 |

In the Madison area there were 101.2 acres on which the vines were saved, with an average of 0.88 load per acre valued at $5.03 per load. For the 57 farms the value per acre for miscellaneous returns was $1.84, or 1 cent per bushel of peas.

*Summary of costs and returns*

In table 31 is given a summary of all costs and returns of the pea crop in each area, and the averages for all the 120 New York farms studied. Using the adjusted figures for Erie County, the average cost of producing 30,829 bushels of peas on the 63 farms in 1925 was $180 per acre, or $2.03 per bushel. On the 57 farms in the Madison area the average cost of producing 73,156 bushels of peas was $186 per acre and the cost per bushel was $1.54. For the 120 farms in both areas, it required $184 per acre and $1.68 per bushel to produce the market peas.

The higher costs of growing and harvesting in Erie County, due to higher land values and labor rates and greater expense in getting and keeping pickers, were more than offset by the higher costs of picking and marketing per acre in the Madison area, due to the higher yields. The cost per bushel was higher in Erie County, however, due entirely to the lower yields per acre in that section for 1925. This last-named factor not only affected the costs per bushel greatly, but also made a striking difference in the net gains. The Erie growers, with a cost per acre $6 lower than that of the Madison growers, and with an average price per bushel of $2.55 as compared with $2.25 per bushel for the Madison farmers, received a net gain per acre of $46.57; while the Madison growers' gain per acre was $86.28. The gains were 52 cents and 71 cents per bushel, respectively, for the two areas.

That the summaries for both areas show a substantial gain after all costs have been accounted for, is due primarily to the relatively high prices for the 1925 season, as is discussed more fully in the section on prices and their relation to profits.

TABLE 31. SUMMARY OF COSTS AND RETURNS, 120 NEW YORK FARMS, 1925

| Items of costs and returns | Erie County, 347.36 acres, 30,829 bushels | | | | Madison area, 605.75 acres, 73,156 bushels | | | | All farms, 953.11 acres, 103,985 bushels | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total amount | Total value | Value per acre | Value per bushel | Total amount | Total value | Value per acre | Value per bushel | Total amount | Total value | Value per acre | Value per bushel |
| Growing: | | | | | | | | | | | | |
| Seed (bushels) | 1,185 | $9,727.69 | $28.01 | $0.31 | 1,244 | $10,261.28 | $16.94 | $0.14 | 2,429 | $19,988.97 | $20.97 | $0.19 |
| Fertilizer (pounds) | 151,870 | 2,725.71 | 7.85 | 0.09 | 187,064 | 3,146.48 | 5.19 | 0.04 | 338,934 | 5,872.19 | 6.16 | 0.06 |
| Lime (tons) | 95 | 111.96 | 0.32 | 0.01 | 98 | 135.13 | 0.22 | ..... | 193 | 247.09 | 0.26 | ..... |
| Manure (tons) | 567 | 1,747.50 | 5.03 | 0.06 | 925 | 1,161.60 | 1.92 | 0.02 | 1,492 | 2,909.10 | 3.05 | 0.03 |
| Man labor (hours) | 3,366 | 1,444.80 | 4.16 | 0.05 | 7,592 | 2,808.00 | 4.64 | 0.04 | 10,958 | 4,252.80 | 4.46 | 0.04 |
| Horse labor (hours) | 4,444 | 967.85 | 2.79 | 0.03 | 11,302 | 2,131.24 | 3.52 | 0.03 | 15,746 | 3,099.09 | 3.25 | 0.03 |
| Tractor cost (hours) | 1,031 | 1,813.14 | 5.22 | 0.06 | 1,566 | 2,406.90 | 3.97 | 0.03 | 2,597 | 4,220.04 | 4.43 | 0.04 |
| Equipment cost (hours) | 4,444 | 444.45 | 1.28 | 0.01 | 11,302 | 1,130.20 | 1.87 | 0.02 | 15,746 | 1,574.65 | 1.66 | 0.02 |
| Interest charge | ..... | 198.42 | 0.57 | 0.01 | ..... | 217.09 | 0.36 | ..... | ..... | 415.51 | 0.44 | ..... |
| Use of land | ..... | 6,281.73 | 18.08 | 0.20 | ..... | 4,529.40 | 7.48 | 0.06 | ..... | 10,811.13 | 11.34 | 0.10 |
| Miscellaneous costs | ..... | ..... | ..... | ..... | ..... | 21.25 | 0.03 | ..... | ..... | 21.25 | 0.02 | ..... |
| Total growing | ..... | $25,463.25 | $73.31 | $0.83 | ..... | $ 27,948.57 | $46.14 | $0.38 | ..... | $53,411.82 | $56.04 | $0.51 |
| Picking: | | | | | | | | | | | | |
| Man labor (hours) | ..... | $12,182.55 | $35.07 | $0.40 | ..... | $ 28,130.51 | $46.44 | $0.38 | ..... | $40,313.06 | $42.30 | $0.39 |
| Harvesting: | | | | | | | | | | | | |
| Harvesting vines: | | | | | | | | | | | | |
| Man labor (hours) | 625 | $ 288.95 | $0.83 | $0.01 | 248 | $ 99.20 | $0.16 | ..... | 873 | $ 388.15 | $0.41 | ..... |
| Horse labor (hours) | 721 | 171.86 | 0.49 | 0.01 | 271 | 50.77 | 0.08 | ..... | 992 | 222.63 | 0.23 | ..... |
| Tractor cost (hours) | ..... | ..... | ..... | ..... | 30 | 2.64 | 0.01 | ..... | 30 | 2.64 | ..... | ..... |
| Harvesting peas: | | | | | | | | | | | | |
| Man labor (hours) | 3,459 | 1,895.58 | 5.46 | 0.06 | 5,231 | 2,121.95 | 3.50 | $0.03 | 8,690 | 4,017.53 | 4.22 | $0.04 |
| Horse labor (hours) | ..... | ..... | ..... | ..... | 222 | 39.65 | 0.07 | ..... | 222 | 39.65 | 0.04 | ..... |
| Equipment cost (hours) | ..... | ..... | ..... | ..... | 222 | 22.20 | 0.04 | ..... | 222 | 22.20 | 0.02 | ..... |
| Automobile and truck cost (miles) | 2,076 | 212.40 | 0.61 | 0.01 | 2,297 | 260.79 | 0.43 | ..... | 4,373 | 473.19 | 0.50 | 0.01 |
| Miscellaneous costs | ..... | 1,176.00 | 3.39 | 0.03 | ..... | 1,843.55 | 3.04 | 0.03 | ..... | 3,019.55 | 3.17 | 0.03 |
| Total harvesting | ..... | $3,744.79 | $10.78 | $0.12 | ..... | $4,440.75 | $7.33 | $0.06 | ..... | $8,185.54 | $8.59 | $0.08 |
| Marketing: | | | | | | | | | | | | |
| Man labor (hours) | 1,445 | $ 629.60 | $ 1.81 | $0.02 | 1,759 | $ 661.60 | $ 1.09 | $0.01 | 3,204 | $ 1,291.20 | $ 1.36 | $0.01 |
| Horse labor (hours) | ..... | ..... | ..... | ..... | 1,181 | 213.65 | 0.35 | ..... | 1,181 | 213.65 | 0.22 | ..... |
| Equipment cost (hours) | ..... | ..... | ..... | ..... | 1,181 | 118.10 | 0.20 | ..... | 1,181 | 118.10 | 0.12 | ..... |
| Automobile and truck cost (miles) | 10,678 | 1,089.30 | 3.14 | 0.03 | 4,528 | 528.07 | 0.87 | 0.01 | 15,206 | 1,617.37 | 1.70 | 0.02 |
| Bags and hampers (number) | ..... | 3,737.90 | 10.76 | 0.12 | ..... | 11,509.01 | 19.00 | 0.16 | ..... | 15,246.91 | 16.00 | 0.15 |
| Association charge | ..... | 1,449.26 | 4.17 | 0.05 | ..... | 1,489.50 | 2.46 | 0.02 | ..... | 2,938.76 | 3.08 | 0.03 |
| Freight, cartage, commission | ..... | 14,785.22 | 42.57 | 0.48 | ..... | 38,495.63 | 63.55 | 0.53 | ..... | 53,280.85 | 55.90 | 0.51 |
| Other marketing costs | ..... | 12.00 | 0.03 | ..... | ..... | 194.84 | 0.32 | ..... | ..... | 206.84 | 0.22 | ..... |
| Total marketing | ..... | $21,703.28 | $62.48 | $0.70 | ..... | $53,210.40 | $87.84 | $0.73 | ..... | $74,913.68 | $78.60 | $0.72 |
| Total cost of pea crop | ..... | $63,093.87 | $181.64 | $2.05 | ..... | $113,730.23 | $187.75 | $1.55 | ..... | $176,824.10 | $185.53 | $1.70 |
| Miscellaneous receipts | ..... | 667.00 | 1.92 | 0.02 | ..... | 1,114.01 | 1.84 | 0.01 | ..... | 1,781.01 | 1.87 | 0.02 |
| Net cost of pea crop | ..... | $62,426.87 | $179.72 | $2.03 | ..... | $112,616.22 | $185.91 | $1.54 | ..... | $175,043.09 | $183.66 | $1.68 |
| Gross sales | ..... | $78,605.57 | $226.29 | $2.55 | ..... | $164,881.55 | $272.19 | $2.25 | ..... | $243,487.12 | $255.47 | $2.34 |
| Net gain | ..... | $16,178.70 | $46.57 | $0.52 | ..... | $52,265.33 | $86.28 | $0.71 | ..... | $68,444.03 | $71.81 | $0.66 |

*Estimated losses*

The estimated losses reported by the growers on the 1925 pea crop are shown in table 32. In Erie County 71 per cent of the growers, and in the Madison area 79 per cent, reported some loss. The proportions of the total acres affected were 46 and 40 per cent, respectively, in the two regions. The estimated average loss per farm was 44 per cent in Erie County and 31 per cent in the Madison area.

TABLE 32. ESTIMATED LOSSES REPORTED BY GROWERS FOR THE 1925 PEA CROP, 120 NEW YORK FARMS

| | Erie County | Madison area | All farms |
|---|---|---|---|
| Number of farms affected* | 45 | 42 | 87 |
| Per cent of farms affected | 71 | 79 | 73 |
| Number of acres affected | 161 | 245 | 406 |
| Per cent of total acres affected | 46 | 40 | 43 |
| Per cent loss per farm | 44 | 31 | 39 |
| Number of farmers attributing loss to dry weather | 36 | 2 | 38 |
| Number of farmers attributing loss to wet weather | 3 | ..... | 3 |
| Number of farmers attributing loss to hot or cold weather | 3 | 3 | 6 |
| Number of farmers attributing loss to blight | 3 | 36 | 39 |
| Number of farmers attributing loss to rot | ..... | 5 | 5 |
| Number of farmers attributing loss to mildew | 3 | ..... | 3 |
| Number of farmers attributing loss to rust | ..... | 1 | 1 |
| Number of farmers attributing loss to aphids | 1 | 2 | 3 |
| Number of farmers attributing loss to other animals | ..... | 4 | 4 |

* Some growers reported more than one cause for loss.

Dry weather during the growing season was the commonest cause of loss. Blight, wet and cold weather, and hot weather, also were reported by a number of growers as having caused some losses. In Erie County the dry, hot weather during the first part of June reduced the yields on most farms. On some farms the peas were almost a total failure.

In the Madison area, the wet weather during the harvesting period caused most of the very late peas to blight badly. The peas on the valley farms were affected the worst, many of the fields being blighted so badly that the peas were left standing in the field. The hill farms, however, were more free from the blight. A number of the growers on these farms shipped first-class peas as late as September.

*Variations in the cost of production*

The variations in the cost of producing market peas in the Erie and Madison areas are shown in tables 33 and 34. In Erie County the costs per acre ranged from $88 to $395, the average being $180. The cost below which 85 per cent of the crop was produced was about $225 per acre. In the Madison area the costs per acre ranged from $44 to $522 per acre, with an average of $186. The cost below which 85 per cent of the crop was produced was about $250 per acre.

The acres of peas grown at various costs per acre, together with the yields per acre and the net profits per acre, are given in table 33. The

TABLE 33. RANGE OF COSTS PER ACRE OF PRODUCING MARKET PEAS ON 120 NEW YORK FARMS IN 1925

| Cost per acre | Average cost per acre | Number of farms | Per cent of total farms | Per cent of farms at this cost or lower | Number of acres | Per cent of total acres | Per cent of acres at this cost or lower | Number of bushels | Per cent of total bushels | Per cent of bushels at this cost or lower | Yield per acre | Profit or loss per acre |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Erie County | | | | | | | | | | | (Bushels) | |
| Less than $100 | $ 88 | 1 | 1.6 | 1.6 | 5.0 | 1.4 | 1.4 | 198 | 0.6 | 0.6 | 25.2 | -$ 15 |
| $100-$150 | 128 | 19 | 30.1 | 31.7 | 120.8 | 34.8 | 36.2 | 7,033 | 22.8 | 23.4 | 58.2 | + 4 |
| $150-$200 | 172 | 20 | 31.8 | 63.5 | 95.6 | 27.5 | 63.7 | 7,466 | 24.2 | 47.6 | 77.2 | + 48 |
| $200-$250 | 222 | 15 | 23.8 | 87.3 | 95.2 | 27.4 | 91.1 | 12,131 | 39.4 | 87.0 | 127.5 | + 96 |
| $250-$300 | 274 | 5 | 7.9 | 95.2 | 27.0 | 7.8 | 98.9 | 3,369 | 10.9 | 97.9 | 124.7 | + 56 |
| $300 or more | 349 | 3 | 4.8 | 100.0 | 3.8 | 1.1 | 100.0 | 632 | 2.1 | 100.0 | 166.0 | +139 |
| All farms | $180 | 63 | 100.0 | .... | 347.4 | 100.0 | .... | 30,829 | 100.0 | ..... | 89.0 | +$47 |
| Madison area | | | | | | | | | | | | |
| Less than $100 | $ 62 | 2 | 3.5 | 3.5 | 14.4 | 2.4 | 2.4 | 224 | 0.3 | 0.3 | 15.4 | -$ 51 |
| $100-$150 | 132 | 12 | 21.0 | 24.5 | 195.5 | 32.3 | 34.7 | 16,470 | 22.5 | 22.8 | 83.3 | + 40 |
| $150-$200 | 168 | 16 | 28.1 | 52.6 | 161.0 | 26.6 | 61.3 | 18,183 | 24.9 | 47.7 | 112.8 | + 68 |
| $200-$250 | 219 | 14 | 24.6 | 77.2 | 131.0 | 21.6 | 82.9 | 18,103 | 24.8 | 72.5 | 138.3 | +122 |
| $250-$300 | 265 | 7 | 12.3 | 89.5 | 85.6 | 14.1 | 97.0 | 14,598 | 19.9 | 92.4 | 170.7 | +153 |
| $300 or more | 381 | 6 | 10.5 | 100.0 | 18.2 | 3.0 | 100.0 | 5,578 | 7.6 | 100.0 | 308.3 | +289 |
| All farms | $186 | 57 | 100.0 | .... | 605.7 | 100.0 | .... | 73,156 | 100.0 | .... | 121.0 | +$86 |

TABLE 34. VARIATIONS IN THE COST PER BUSHEL OF PRODUCING MARKET PEAS ON 120 NEW YORK FARMS IN 1925

| Cost per bushel | Average cost per bushel | Number of farms | Per cent of total farms | Per cent of farms at this cost or lower | Number of acres | Per cent of total acres | Per cent of acres at this cost or lower | Number of bushels | Yield per acre |
|---|---|---|---|---|---|---|---|---|---|
| Erie County | | | | | | | | | (Bushels) |
| Less than $1.00 | $0.90 | 9 | 14.3 | 14.3 | 48.0 | 13.8 | 13.8 | 6,637 | 138 |
| $1.00–$1.24 | 1.15 | 16 | 25.4 | 39.7 | 80.5 | 23.2 | 37.0 | 8,715 | 108 |
| $1.25–$1.49 | 1.38 | 12 | 19.0 | 58.7 | 99.1 | 28.6 | 65.6 | 8,525 | 85 |
| $1.50–$1.74 | 1.61 | 10 | 15.8 | 74.5 | 43.6 | 12.6 | 78.2 | 2,903 | 67 |
| $1.75–$1.99 | 1.86 | 2 | 3.2 | 77.7 | 9.5 | 2.7 | 80.9 | 864 | 91 |
| $2.00–$2.24 | 2.21 | 2 | 3.2 | 80.9 | 16.0 | 4.6 | 85.5 | 702 | 44 |
| $2.25–$2.49 | 2.33 | 2 | 3.2 | 84.1 | 10.0 | 2.9 | 88.4 | 856 | 86 |
| $2.50–$2.74 | 2.67 | 3 | 4.8 | 88.9 | 11.0 | 3.2 | 91.6 | 542 | 49 |
| $2.75–$2.99 | 2.86 | 3 | 4.8 | 93.7 | 12.0 | 3.3 | 94.9 | 526 | 44 |
| $3.00 or more | 3.42 | 4 | 6.3 | 100.0 | 17.7 | 5.1 | 100.0 | 559 | 32 |
| All farms | .... | 63 | 100.0 | .... | 347.4 | 100.0 | .... | 30,829 | 89 |
| Madison area | | | | | | | | | |
| Less than $1.00 | $0.86 | 5 | 8.8 | 8.8 | 11.0 | 1.8 | 1.8 | 1,626 | 148 |
| $1.00–$1.24 | 1.11 | 3 | 5.3 | 14.1 | 8.5 | 1.4 | 3.2 | 1,271 | 150 |
| $1.25–$1.49 | 1.41 | 19 | 33.3 | 47.4 | 224.2 | 37.0 | 40.2 | 30,121 | 134 |
| $1.50–$1.74 | 1.60 | 17 | 29.8 | 77.2 | 209.0 | 34.5 | 74.7 | 27,437 | 131 |
| $1.75–$1.99 | 1.78 | 8 | 14.0 | 91.2 | 92.0 | 15.2 | 89.9 | 8,797 | 96 |
| $2.00–$2.24 | 2.05 | 4 | 7.0 | 98.2 | 49.0 | 8.1 | 98.0 | 3,680 | 75 |
| $2.25 or more | 4.31 | 1 | 1.8 | 100.0 | 12.0 | 2.0 | 100.0 | 224 | 19 |
| All farms | .... | 57 | 100.0 | .... | 605.7 | 100.0 | .... | 73,156 | 121 |

growers with low costs per acre, in general, had low yields and made less profits per acre than did the growers with higher costs. This indicates that in years of good prices, as in 1925, it pays to get very high yields even at an increased cost per acre. Yield per acre and cost per acre are so closely related, however, in the production of market peas, where most of the items of cost are on the bushel basis, that the relation to profits shown is largely a matter of yield per acre, with higher costs merely indicating the higher yields.

With a different price situation, it might occur that greater losses would go with high yields, since higher yields would mean higher total costs just the same. Practically the only difference in costs per acre, under different market prices, for the same yields, is in the commission rates, which are a percentage of the sale value of the peas.

The variations in the cost per bushel of producing market peas are given in table 34. In Erie County the total cost of production ranged from 76 cents to $4.28 per bushel. The average cost per bushel was $2.03. The cost below which 85 per cent of the crop was produced was about $1.67. In the Madison area the costs per bushel ranged from 78 cents to $4.31. The average cost per bushel was $1.54. The cost below which 85 per cent of the crop was produced was about $1.77. These costs include all expenses incurred directly or indirectly in growing, picking, and marketing the crop, until the peas are sold on the wholesale market. Hence, if the returns from peas just equal the cost, the grower still has the returns for his labor and some interest.

The question, however, whether or not one should grow peas, does not depend entirely on the cost per bushel or per acre. The possible returns from one's best alternative must be considered also. If the returns from peas are sufficient to pay a profit above all costs, they still may not be so good as could be obtained from some alternative. In that case peas should not be produced.

Conversely, if one has a poor alternative he may continue to produce peas even tho his returns fail to pay all costs. He may still be getting more returns per hour of labor than if he chose his next alternative.

Consequently, the marginal producer — the one nearest to dropping out — may not be the grower with the highest costs. It is the one with the best alternative opportunity, whether the costs are low or high.

### *Returns per acre, per bushel, and per hour*

A comparison of the returns per acre, per bushel, and per hour of human labor, from market peas in 1925, with the 1914–1924 averages for a few other crops, is given in table 35. As shown in this table, the returns from market peas in 1925 were considerably higher than the ten-year averages for any of the five cash crops listed. The combination of large yields with high prices gave the 57 growers in the Madison area an average of $3.91 per man hour for all the time spent on peas other than in picking; the cost of picking was considered a cash cost, since practically all of the labor for it was hired.

The Erie County growers did not do so well, since their yields were lower. The higher prices received and the lower costs of production, however,

TABLE 35. COMPARISON OF RETURNS PER ACRE, PER BUSHEL, AND PER HOUR FOR MARKET PEAS IN 1925, WITH THE 1914–1924 AVERAGES FOR OTHER IMPORTANT CROPS IN NEW YORK

| | Peas, Erie County | Peas, Madison area | Potatoes, New York | Cabbage, New York | Beans, New York | Wheat, New York | Hay, New York |
|---|---|---|---|---|---|---|---|
| Number of farms | 63 | 57 | 274 | 90 | 69 | 199 | 345 |
| Acres grown per farm | 5.5 | 10.6 | 5.0 | 4.7 | 9.2 | 15.0 | 40.5 |
| Yield per acre | 89 bu. | 121 bu. | 130.7 bu. | 6.9 T. | 12.3 bu. | 22.5 bu. | 1.52 T. |
| Hours of human labor per acre | 196.6* | 189.9* | 94.6 | 97.6 | 40.0 | 23.2 | 10.4 |
| Hours of human labor, except for picking, per acre | 25.7 | 24.5 | ..... | ..... | ..... | ..... | ..... |
| Cost per acre | $180 | $186 | $105 | $87 | $52 | $41 | $21 |
| Cost per unit | $2.03 | $1.54 | $0.83 | $12.54 | $4.61 | $1.68 | $13.94 |
| Value per unit | $2.55 | $2.25 | $0.94 | $14.94 | $3.41 | $1.56 | $15.81 |
| Gain or loss per acre | +$46.57 | +$86.28 | +$9.88 | +$9.23 | −$9.65 | −$1.90 | +$3.02 |
| Gain or loss per unit | +$0.52 | +$0.71 | +$0.12 | +$2.41 | −$1.21 | −$0.12 | +$1.86 |
| Returns per hour of human labor | $0.45 | $0.77 | $0.47 | $0.42 | $0.13 | $0.25 | $0.65 |
| Returns per hour of man labor other than for picking† | $2.30 | $3.91 | ..... | ..... | ..... | ..... | ..... |

* Hours of labor for picking not reduced to man equivalent nor reported by all growers. Estimates were used where not reported.

† All costs (including the cost of picking) were deducted from the gross returns to get the net gain. The cost of man labor other than for picking was then added to the net gain, and this result was divided by the total hours of man labor other than for picking to get the return per hour for the operator's time spent on peas.

enabled them to earn a return of $2.30 per hour for the time spent on peas other than in picking.

When the hours for picking as shown in table 25 are used, the returns per hour for all labor on peas were 45 cents for Erie County and 77 cents in the Madison area, or 65 cents for all farms. This return per hour is the same as the ten-year average of cost accounts for hay, but is higher than that for the other crops included in table 35.

Returns per hour for any one year such as 1925, however, cannot be considered as normal returns and must be used with caution when making plans for the future. As stated previously, the 1925 season was undoubtedly an unusually prosperous year for pea growers. It is true that some had severe losses or complete failures; but the average returns per acre on the 120 farms studied in 1925 are probably higher than the average return would be over a period of years. One should analyze the price situation carefully before making any plans based on these average returns for the 1925 season.

*Relation of returns from peas to the acres of peas planted*

The total market-pea acreage in 1923, as reported by 56 Madison growers, was 332 acres, as compared with 555 acres which they contemplated planting in 1926. In Erie County the market-pea acreage for the 63 growers in 1923 was 301, as compared with 346 acres estimated for 1926. The percentage increase in the four years was 67 in the Madison area and 15 in Erie County.

This relation of increase in market-pea acreage to returns per acre is shown also in the estimates by growers of the relative profitableness of pea production in the two areas. In Erie County about one-third of the growers reported peas paying as well as or better than other crops, while two-thirds of the growers said that peas paid just fairly or poorly. In the Madison area two-thirds of the growers considered peas as profitable as or better than other crops, and only one-third thought that peas paid just fairly or poorly. The data are given in tables 36 and 37.

TABLE 36. CHANGES IN PEA ACREAGE REPORTED BY GROWERS, 119 NEW YORK FARMS, 1925

| | Erie County | Madison area | All farms |
|---|---|---|---|
| Number of farmers reporting | 63 | 56 | 119 |
| Total pea acreage in 1923 | 301 | 332 | 633 |
| Total pea acreage in 1924 | 360 | 474 | 834 |
| Total pea acreage in 1925 | 347 | 546 | 893 |
| Total pea acreage in 1926 | 346 | 555 | 901 |
| 1923 acreage, per cent | 100 | 100 | 100 |
| 1924 acreage, per cent of 1923 | 120 | 144 | 132 |
| 1925 acreage, per cent of 1923 | 115 | 164 | 141 |
| 1926 acreage, per cent of 1923 | 115 | 167 | 143 |

TABLE 37. ESTIMATES BY GROWERS OF THE RELATIVE PROFITABLENESS OF PEA PRODUCTION, 113 NEW YORK FARMS, 1925

| | Erie County | Madison area | All farms |
|---|---|---|---|
| Number of farmers reporting | 62 | 51 | 113 |
| Number reporting that peas pay best | 1 | 13 | 14 |
| Number reporting that peas pay well | 20 | 21 | 41 |
| Number reporting that peas pay fairly | 23 | 17 | 40 |
| Number reporting that peas pay poorly | 18 | 0 | 18 |
| Per cent reporting that peas pay best | 1.6 | 25.5 | 12.4 |
| Per cent reporting that peas pay well | 32.3 | 41.2 | 36.4 |
| Per cent reporting that peas pay fairly | 37.1 | 33.3 | 35.3 |
| Per cent reporting that peas pay poorly | 29.0 | 0 | 15.9 |

*Cost of producing peas on farms keeping cost accounts*

Two of the farms keeping cost accounts in cooperation with the Department of Agricultural Economics and Farm Management of the New York State College of Agriculture, grew market peas in 1925. One of these farms was in Erie County and the other was in the Madison area. In tables 38 and 39 are given the summaries of the costs and returns in the production of market peas for the years when detailed cost records were kept.

The Erie County farmer has cooperated in keeping records for twelve years. He is one of the largest and most successful pea growers in the county. His yields, costs, and returns are undoubtedly much higher than the average for the region over the twelve-year period. The Madison County farmer has kept cost accounts for only three years. His pea acreage is about half the average for the region, and hence is hardly representative of the Madison area. However, his records show the variations in costs and returns, for the past three years, on a typical dairy farm growing a few acres of market peas along with corn silage, grain, and hay.

TABLE 38. VARIATION IN THE COSTS AND RETURNS FOR MARKET PEAS ON AN ERIE COUNTY FARM, 1914 TO 1925

| | 1914 | 1915 | 1916 | 1917 | 1918 | 1919 | 1920 | 1921 | 1922 | 1923 | 1924 | 1925 | Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Acres grown | 15.5 | 14.5 | 13.8 | 10.2 | 10.3 | 10.2 | 13.6 | 13.2 | 16.4 | 17.5 | 18.4 | 18.7 | 14.4 |
| Total yield (bushels) | 1,929.0 | 1,995.2 | 2,477.0 | 2,587.0 | 2,098.2 | 678.5 | 2,309.8 | 1,825.8 | 3,195.0 | 3,016.5 | 3,484.8 | 2,495.0 | 2,305.0 |
| Growing costs: | | | | | | | | | | | | | |
| Labor: | | | | | | | | | | | | | |
| Man | $ 43.35 | $ 68.40 | $ 63.14 | $ 52.35 | $ 80.35 | $ 99.27 | $112.88 | $ 98.31 | $100.03 | $286.34 | $198.15 | $153.69 | $113.02 |
| Horse | 50.73 | 91.76 | 103.20 | 87.71 | 113.95 | 89.60 | 112.04 | 64.25 | 54.35 | 111.99 | 76.85 | 75.92 | 86.03 |
| Equipment | 14.93 | 30.93 | 37.27 | 28.10 | 38.92 | 57.82 | 64.70 | 48.36 | 44.06 | 74.31 | 58.10 | 64.49 | 46.83 |
| Truck | | | 104.42 | | 0.54 | | | | | | | | 8.75 |
| Tractor | | | | | | | | 101.70 | 65.42 | 42.67 | 42.89 | 40.37 | 24.42 |
| Seed | 254.46 | 318.41 | 185.75 | 238.78 | 282.25 | 422.00 | 572.40 | 505.70 | 451.00 | 453.06 | 463.50 | 514.50 | 388.48 |
| Fertilizer | 82.24 | 68.53 | 8.17 | | 5.43 | 9.52 | 94.26 | 90.74 | 78.47 | 105.04 | 98.53 | 106.21 | 62.26 |
| Lime | | 1.38 | 7.43 | | 7.27 | 9.45 | 78.59 | 89.32 | 67.89 | 157.63 | 62.13 | 59.80 | 45.08 |
| Manure | 28.41 | 14.00 | 38.90 | 177.50 | 175.73 | 121.51 | 50.04 | | | 329.68 | 103.34 | 10.36 | 87.46 |
| Use of land | 180.00 | 174.00 | 142.65 | 123.00 | 167.83 | 137.14 | 337.85 | 196.94 | 180.80 | 265.01 | 338.39 | 267.35 | 209.25 |
| Interest | 4.40 | 6.54 | 5.40 | 6.05 | 6.65 | 5.25 | 9.95 | 9.31 | 10.05 | 16.55 | 13.95 | 11.50 | 8.80 |
| Miscellaneous | 10.87 | 19.48 | 18.25 | 11.81 | 96.79 | 8.68 | 13.35 | 147.10 | 95.46 | 175.72 | 265.56 | 189.95 | 87.75 |
| Total growing | $669.39 | $793.43 | $714.58 | $725.30 | $975.77 | $960.24 | $1,446.06 | $1,351.73 | $1,147.53 | $2,018.00 | $1,721.39 | $1,494.14 | $1,168.13 |
| Per acre | $43.19 | $54.72 | $51.78 | $71.11 | $94.73 | $94.14 | $106.32 | $102.40 | $69.97 | $115.31 | $93.55 | $79.90 | $81.36 |
| Per bushel | $0.34 | $0.40 | $0.29 | $0.28 | $0.47 | $1.41 | $0.62 | $0.74 | $0.36 | $0.67 | $0.50 | $0.60 | $0.50 |
| Picking cost | $367.38 | $316.73 | $417.14 | $557.00 | $450.55 | $246.62 | $668.56 | $482.83 | $1,041.90 | $1,207.40 | $1,230.16 | $891.75 | $656.50 |
| Per acre | $23.70 | $21.84 | $30.23 | $54.61 | $43.74 | $24.18 | $49.16 | $36.58 | $63.53 | $68.99 | $66.86 | $47.69 | $45.72 |
| Per bushel | $0.19 | $0.16 | $0.17 | $0.22 | $0.21 | $0.36 | $0.29 | $0.27 | $0.33 | $0.40 | $0.35 | $0.36 | $0.28 |
| Marketing costs: | | | | | | | | | | | | | |
| Labor: | | | | | | | | | | | | | |
| Man | $19.22 | $15.58 | $44.46 | $18.68 | $28.72 | $45.82 | $62.23 | $ 46.59 | $72.57 | $117.03 | $ 89.72 | $ 65.77 | $52.20 |
| Horse | 7.04 | | 5.40 | | | | 2.40 | 2.83 | 0.33 | | | 0.32 | 1.53 |
| Equipment | 2.07 | | 1.97 | | | | 1.38 | 2.13 | 0.27 | | | 0.27 | 0.67 |
| Truck | 18.04 | | | 35.31 | 34.65 | 23.17 | | | | 44.92 | 61.78 | 72.17 | 24.17 |
| Threshing | | 5.20 | | | | | | | | | | | 0.43 |
| Bossing | | | 46.32 | | 75.00 | | 91.01 | 92.51 | | 198.90 | 157.20 | 126.75 | 65.64 |
| Baskets | 3.18 | | | | | | | | | | | | 0.27 |
| Miscellaneous | 2.93 | 44.59 | 17.46 | 11.97 | 15.59 | 9.50 | 68.28 | 154.28 | 65.54 | 140.45 | 52.47 | 66.08 | 54.10 |
| Total marketing | $52.48 | $65.37 | $115.61 | $65.96 | $153.96 | $78.49 | $225.30 | $298.34 | $138.71 | $501.30 | $361.17 | $331.36 | $199.01 |
| Per acre | $3.38 | $4.51 | $8.38 | $6.46 | $14.95 | $7.69 | $16.57 | $22.60 | $8.46 | $28.65 | $19.63 | $17.72 | $13.86 |
| Per bushel | $0.03 | $0.03 | $0.04 | $0.02 | $0.07 | $0.12 | $0.10 | $0.16 | $0.04 | $0.17 | $0.10 | $0.13 | $0.08 |
| Total cost of crop | $1,089.25 | $1,175.53 | $1,247.33 | $1,348.26 | $1,580.28 | $1,285.35 | $2,339.92 | $2,132.90 | $2,328.14 | $3,726.70 | $3,312.72 | $2,717.25 | $2,023.64 |
| Per acre | $70.27 | $81.07 | $90.39 | $132.18 | $153.42 | $126.01 | $172.05 | $161.58 | $141.96 | $212.95 | $180.04 | $145.31 | $140.94 |
| Per bushel | $0.56 | $0.59 | $0.50 | $0.52 | $0.75 | $1.89 | $1.01 | $1.17 | $0.73 | $1.24 | $0.95 | $1.09 | $0.86 |
| Miscellaneous returns | $101.00 | $163.50 | $77.50 | $152.25 | $216.00 | $198.00 | $94.00 | $120.00 | $106.85 | $96.00 | $153.00 | $134.00 | $134.34 |
| Net cost of crop | $988.25 | $1,012.03 | $1,169.83 | $1,196.01 | $1,364.28 | $1,087.35 | $2,245.92 | $2,012.90 | $2,221.29 | $3,630.70 | $3,159.72 | $2,583.25 | $1,889.29 |
| Per acre | $63.76 | $69.79 | $84.77 | $117.25 | $132.45 | $106.60 | $165.14 | $152.49 | $135.44 | $207.47 | $171.72 | $138.14 | $131.58 |
| Per bushel | $0.51 | $0.51 | $0.47 | $0.46 | $0.65 | $0.16 | $0.97 | $1.10 | $0.70 | $1.20 | $0.91 | $1.04 | $0.81 |
| Sale of peas | $2,054.62 | $662.42 | $2,360.21 | $2,920.08 | $3,500.27 | $1,263.58 | $3,966.59 | $3,687.71 | $6,447.20 | $4,150.64 | $3,868.79 | $4,786.57 | $3,305.72 |
| Per acre | $132.56 | $45.68 | $171.03 | $286.28 | $339.83 | $123.88 | $291.66 | $279.37 | $393.12 | $237.18 | $210.26 | $255.96 | $230.23 |
| Per bushel | $1.06 | $0.33 | $0.95 | $1.13 | $1.67 | $0.19 | $1.71 | $2.02 | $2.02 | $1.37 | $1.11 | $1.92 | $1.41 |
| Profit or loss | +$1,066.37 | -$349.61 | +$1,190.38 | +$1,724.07 | +$2,135.99 | +$176.23 | +$1,720.67 | +$1,674.81 | +$4,225.91 | +$519.94 | +$709.07 | +$2,203.32 | +$1,416.43 |
| Per acre | +$68.80 | -$24.11 | +$86.26 | +$169.03 | +$207.38 | +$17.28 | +$126.52 | +$126.88 | +$257.68 | +$29.71 | +$38.54 | +$117.82 | +$98.65 |
| Per bushel | +$0.55 | -$0.18 | +$0.48 | +$0.67 | +$1.02 | +$0.03 | +$0.74 | +$0.92 | +$1.32 | +$0.17 | +$0.20 | +$0.88 | +$0.60 |

TABLE 39. VARIATION IN THE COSTS AND RETURNS FOR MARKET PEAS ON A MADISON COUNTY FARM, 1923 TO 1925

| | 1923 | 1924 | 1925 | Average |
|---|---|---|---|---|
| Acres grown | 7 | 6.2 | 5.5 | 6.2 |
| Total yield (bushels) | 655 | 999 | 1,149 | 934 |
| Growing costs: | | | | |
| Labor: | | | | |
| Man | $ 61.69 | $115.32 | $ 24.48 | $ 67.16 |
| Horse | 36.60 | 43.70 | 16.79 | 32.36 |
| Equipment | 14.79 | 17.50 | 4.47 | 12.26 |
| Truck | 3.46 | 12.55 | 1.73 | 5.91 |
| Seed | 104.25 | 102.75 | 98.00 | 101.67 |
| Fertilizer | 25.76 | 11.03 | ..... | 12.26 |
| Manure | 13.02 | 72.66 | 246.52 | 110.73 |
| Use of land | 23.75 | 20.40 | 18.69 | 20.95 |
| Interest | 5.20 | 6.75 | 2.15 | 4.70 |
| Miscellaneous | 336.82 | 429.84 | 0.71 | 255.79 |
| Total growing | $625.34 | $832.50 | $413.54 | $623.79 |
| Per acre | $89.33 | $134.27 | $75.19 | $100.07 |
| Per bushel | $0.95 | $0.84 | $0.36 | $0.67 |
| Picking cost | $262.00 | $272.52 | * | $178.18 |
| Per acre | $37.43 | $43.96 | ..... | $28.58 |
| Per bushel | $0.40 | $0.27 | ..... | $0.19 |
| Marketing costs: | | | | |
| Labor: | | | | |
| Man | $ 18.25 | $ 18.91 | $ 0.78 | $12.64 |
| Horse | 8.78 | 5.89 | ..... | 4.89 |
| Equipment | 2.71 | 2.68 | ..... | 1.80 |
| Truck | 8.52 | 12.71 | ..... | 7.08 |
| Baskets | 101.25 | 185.33 | ..... | 95.52 |
| Miscellaneous | 50.25 | 45.65 | 36.00 | 43.97 |
| Total marketing | $189.76 | $271.17 | $36.78 | $165.90 |
| Per acre | $27.11 | $43.74 | $6.69 | $26.62 |
| Per bushel | $0.29 | $0.27 | $0.03 | $0.18 |
| Total cost of crop | $1,077.10 | $1,376.19 | $450.32 | $967.87 |
| Per acre | $153.87 | $221.97 | $81.88 | $155.27 |
| Per bushel | $1.64 | $1.38 | $0.39 | $1.04 |
| Miscellaneous returns | $38.75 | $52.38 | $10.50 | $33.88 |
| Per acre | $5.54 | $8.45 | $1.91 | $5.43 |
| Per bushel | $0.05 | $0.05 | $0.01 | $0.04 |
| Net cost of crop | $1,038.35 | $1,323.81 | $439.82 | $933.99 |
| Per acre | $148.33 | $213.52 | $79.97 | $149.84 |
| Per bushel | $1.59 | $1.33 | $0.38 | $1.00 |
| Sale of peas | $1,033.86 | $1,465.95 | $475.00 | $991.60 |
| Per acre | $147.69 | $236.45 | $86.37 | $159.08 |
| Per bushel | $1.58 | $1.47 | $0.41 | $1.06 |
| Profit or loss | −$4.49 | +$142.14 | +$35.18 | +$57.61 |
| Per acre | −$0.64 | +$22.93 | +$6.40 | +$9.24 |
| Per bushel | −$0.01 | +$0.14 | +$0.03 | +$0.06 |

*Sold to speculator who harvested the crop.

### YIELD PER ACRE AND FACTORS AFFECTING YIELD

The yields per acre of green peas on a number of Madison and Chenango County farms for five consecutive years are shown in table 40. The average yield was lowest, 89 bushels per acre, in 1922, and highest, 170 bushels per acre, in 1924. Both early and late varieties are included.

TABLE 40. YIELD PER ACRE OF GREEN PEAS IN MADISON AND CHENANGO COUNTIES, 1921 TO 1925

| Year | Number of farms | Number of acres | Number of bushels | Average yield per acre, in bushels |
|---|---|---|---|---|
| 1921 | 50 | 290 | 37,483 | 129 |
| 1922 | 61 | 331 | 29,453 | 89 |
| 1923 | 47 | 198.5 | 25,345 | 128 |
| 1924 | 48 | 233.2 | 39,619 | 170 |
| 1925 | 57 | 605.7 | 73,156 | 121 |
| Total | 263 | 1,658.4 | 205,056 | 637 |
| Average | 53 | 331.7 | 41,011 | 124 |

*Variety and yield*

Usually the late varieties yield more than do the early varieties. In the Madison area in 1925, however, many of the fields of late varieties were blighted so badly that they were not picked at all, resulting in a lower average yield than normal for late varieties.

In table 41 are given the yields per acre for the early and late varieties

TABLE 41. RELATION OF ACRES OF PEAS PER FARM TO YIELD AND VALUE PER ACRE FOR EARLY AND LATE VARIETIES, 116 NEW YORK FARMS, 1925

| Acres of peas per farm | Early varieties | | | | Late varieties | | | |
|---|---|---|---|---|---|---|---|---|
| | Number of farms | Number of acres | Yield per acre, in bushels | Value per acre | Number of farms | Number of acres | Yield per acre, in bushels | Value per acre |
| | Erie County, 62 farms | | | | | | | |
| Less than 3 | 13 | 17.70 | 75 | $150 | 18 | 22.7 | 108 | $177 |
| From 3 to 6 | 15 | 24.80 | 68 | 143 | 18 | 49.4 | 88 | 177 |
| 6 or more | 18 | 72.50 | 79 | 169 | 19 | 141.5 | 90 | 161 |
| All farms | 46 | 115.00 | 76 | $160 | 55 | 213.7 | 92 | $166 |
| | Madison area, 54 farms | | | | | | | |
| Less than 3 | 10 | 8.75 | 159 | $477 | 14 | 15.5 | 153 | $258 |
| From 3 to 6 | 14 | 24.80 | 148 | 450 | 16 | 40.8 | 127 | 232 |
| 6 or more | 21 | 137.50 | 104 | 334 | 20 | 306.0 | 107 | 204 |
| All farms | 45 | 171.00 | 113 | $355 | 50 | 362.2 | 112 | $210 |
| | All farms, 116 | | | | | | | |
| Less than 3 | 23 | 26.50 | 103 | $253 | 32 | 38.2 | 126 | $210 |
| From 3 to 6 | 29 | 49.60 | 108 | 285 | 34 | 90.2 | 106 | 202 |
| 6 or more | 39 | 210.00 | 60 | 277 | 39 | 447.5 | 102 | 191 |
| All farms | 91 | 286.10 | 79 | $276 | 105 | 575.9 | 104 | $194 |

on 116 farms. The average yield in Erie County was 76 bushels per acre for the early varieties and 92 bushels per acre for the late varieties. In the Madison area the early varieties averaged 113 bushels per acre and the late varieties 112 bushels per acre.

### *Weather and yield*

One of the most important factors affecting yield per acre is precipitation. Since the peas are planted in succession, on dates ranging from April 1 to July 1, the crop begins to be harvested usually in the latter part of June. The rainfall for the month of June, therefore, is more important than that for any other month of the growing season, and largely determines the size of the pea crop.

The normal rainfall for May, June, and July in the principal market-pea areas in New York are given in table 42. The combined rainfall in per-

TABLE 42. NORMAL RAINFALL FOR STATIONS IN THE PRINCIPAL NEW YORK MARKET-PEA AREAS

| Stations | May | | June | | July | | Average total of three months rainfall |
|---|---|---|---|---|---|---|---|
| | Number of years entering average | Average rainfall | Number of years entering average | Average rainfall | Number of years entering average | Average rainfall | |
| | | (Inches) | | (Inches) | | (Inches) | (Inches) |
| Buffalo | 18 | 2.78 | 18 | 2.29 | 18 | 2.69 | 7.76 |
| Norwich | 18 | 3.44 | 18 | 3.98 | 18 | 4.06 | 11.84 |

centage of the normal for the eighteen years from 1908 to 1925, and the seasonal departures for each year, are given in tables 43 and 44 for the Erie and Madison areas, respectively. These data show the variation in the rainfall during the three important pea-growing months, by years

TABLE 43. ANNUAL MAY, JUNE, AND JULY RAINFALL IN THE ERIE COUNTY MARKET-PEA AREA FOR THE EIGHTEEN YEARS FROM 1908 TO 1925, INCLUSIVE, IN RELATION TO THE NORMAL

| Year | Per cent of normal | | | | Departure above normal | Departure below normal |
|---|---|---|---|---|---|---|
| | May | June | July | Three-months total | | |
| 1908 | 146.8 | 107.0 | 126.4 | 128.0 | 28.0 | .... |
| 1909 | 155.8 | 45.9 | 92.6 | 101.4 | 1.4 | .... |
| 1910 | 103.2 | 45.9 | 198.1 | 119.2 | 19.2 | .... |
| 1911 | 46.8 | 97.4 | 163.9 | 102.3 | 2.3 | .... |
| 1912 | 125.9 | 36.2 | 52.4 | 74.0 | .... | 26.0 |
| 1913 | 89.2 | 73.8 | 38.3 | 67.0 | .... | 33.0 |
| 1914 | 132.0 | 75.1 | 48.3 | 86.2 | .... | 13.8 |
| 1915 | 66.9 | 75.1 | 125.3 | 89.6 | .... | 10.4 |
| 1916 | 148.6 | 176.4 | 75.8 | 131.6 | 31.6 | .... |
| 1917 | 103.6 | 230.6 | 165.8 | 162.6 | 62.6 | .... |
| 1918 | 88.8 | 122.7 | 50.9 | 85.7 | .... | 14.3 |
| 1919 | 155.4 | 23.6 | 49.4 | 79.8 | .... | 20.2 |
| 1920 | 39.6 | 135.8 | 167.3 | 112.2 | 12.2 | .... |
| 1921 | 75.9 | 66.4 | 52.8 | 65.1 | .... | 34.9 |
| 1922 | 72.3 | 147.6 | 93.7 | 101.9 | 1.9 | .... |
| 1923 | 110.1 | 159.0 | 26.4 | 95.9 | .... | 4.1 |
| 1924 | 93.2 | 117.5 | 152.4 | 120.9 | 20.9 | .... |
| 1925 | 44.6 | 61.6 | 121.9 | 76.4 | .... | 23.6 |

TABLE 44. ANNUAL MAY, JUNE, AND JULY RAINFALL IN THE MADISON MARKET-PEA AREA FOR THE EIGHTEEN YEARS FROM 1908 TO 1925, INCLUSIVE, IN RELATION TO THE NORMAL

| Year | Per cent of normal | | | | Departure above normal | Departure below normal |
|---|---|---|---|---|---|---|
| | May | June | July | Three-months total | | |
| 1908 | 118.3 | 68.8 | 100.2 | 94.7 | .... | 5.3 |
| 1909 | 101.7 | 86.7 | 77.1 | 87.7 | .... | 12.3 |
| 1910 | 139.2 | 80.7 | 41.1 | 84.2 | .... | 15.8 |
| 1911 | 86.3 | 126.1 | 45.6 | 85.6 | .... | 14.4 |
| 1912 | 53.2 | 28.6 | 68.7 | 50.1 | .... | 49.9 |
| 1913 | 111.9 | 38.9 | 16.3 | 55.4 | .... | 44.6 |
| 1914 | 78.2 | 151.5 | 113.8 | 116.1 | 16.1 | .... |
| 1915 | 66.0 | 59.5 | 251.5 | 129.2 | 29.2 | .... |
| 1916 | 119.8 | 117.1 | 57.9 | 96.9 | .... | 3.1 |
| 1917 | 119.2 | 221.6 | 128.6 | 157.9 | 57.9 | .... |
| 1918 | 143.9 | 87.2 | 122.4 | 116.5 | 16.5 | .... |
| 1919 | 144.8 | 35.2 | 165.8 | 114.1 | 14.1 | .... |
| 1920 | 38.4 | 95.0 | 96.8 | 78.6 | .... | 21.4 |
| 1921 | 54.9 | 75.6 | 143.1 | 93.2 | .... | 6.8 |
| 1922 | 117.7 | 228.6 | 56.4 | 134.4 | 34.4 | .... |
| 1923 | 94.2 | 93.0 | 63.6 | 93.2 | .... | 6.8 |
| 1924 | 123.8 | 75.1 | 80.5 | 91.6 | .... | 8.4 |
| 1925 | 90.4 | 132.7 | 133.0 | 120.0 | 20.0 | .... |

The relation between the Buffalo June rainfall, and the average yield per acre on an Erie County farm growing a large acreage of peas for the twelve years 1914 to 1925, is shown by the high correlation coefficient of +0.89 ±0.01. The relationship between the June rainfall and the yield per acre is shown also in figure 4. For these twelve years, for each 0.10 inch varia-

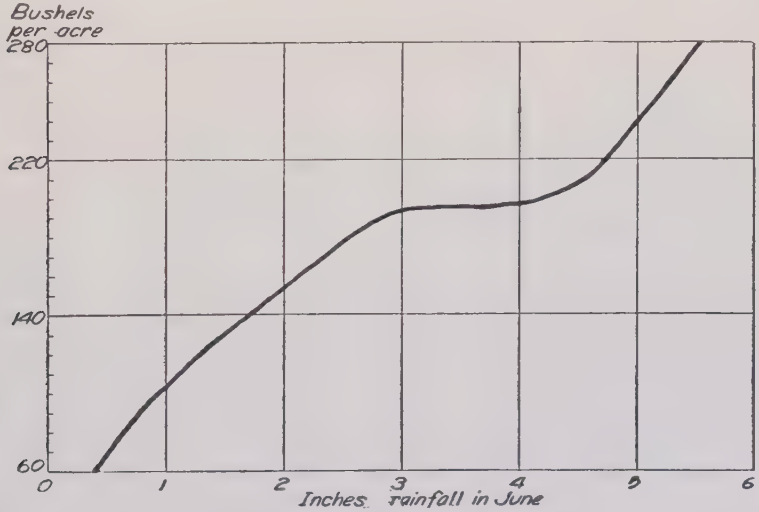



FIGURE 4. YIELD PER ACRE FOR VARYING AMOUNTS OF RAINFALL
(Calculated from 12-year records of an Erie County pea grower, and the June rainfall at Buffalo, New York)

tion in the June rainfall there was an average variation in yield per acre of 4.4 bushels. That is, on the average, if the rainfall was 1 inch more than in the previous year, the yield per acre increased 44 bushels over that of the previous year.

*Forecasting pea production from the rainfall*

With such crops as peas, where no early estimates are published of size of the crop it is desirable to have some means of estimating the probable production, such as is furnished by the relation of rainfall to yield per acre. A final report of the rainfall for June can be obtained from the office of the United States Weather Bureau on July 1. From these data one can forecast the probable market-pea production for the season, and, with the production forecast known, one is in a better position to estimate probable prices for the season than if he depended entirely on newspaper reports.

In figure 5 are shown the results of applying this idea to each of the twelve years from 1914 to 1925, and comparing the resulting forecast with the

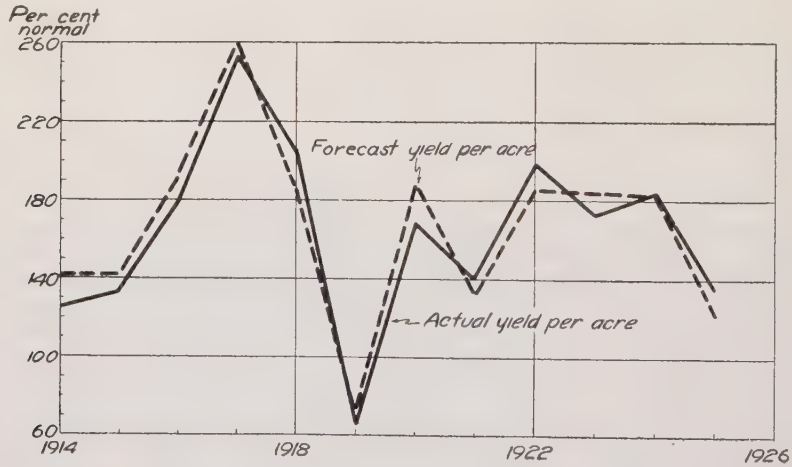



FIGURE 5. FORECAST YIELDS PER ACRE OF MARKET PEAS ON AN ERIE COUNTY FARM, AND THE ACTUAL YIELDS PER ACRE, FOR THE TWELVE YEARS 1914 TO 1925

actual yield obtained for those years. For the twelve years the average difference between the actual yield and the forecasted yield was 7.5 per cent.

Reliable data for the market-pea acreage and the yield per acre for all of the market-pea-producing sections were not available, so that this relationship of yield per acre to the June rainfall could not be tested accurately in other regions. Individual growers, however, can keep records of their own yields, as did the grower in Erie County, and can obtain rainfall data from the nearest Weather Bureau office.

The average wholesale price of green peas in New York City, when corrected for trend, gave a correlation coefficient of $-0.334 \pm 0.05$ with the Buffalo June rainfall. This is not so high a correlation as the one between yield per acre and rainfall, because of the variation in acreage planted in different years; but it is high enough to be significant.

*Amount of seed used, and yield*

The great variation in yield in the Madison area, from a total failure to a yield of more than 300 bushels per acre in the same year, indicates that other factors besides weather affect the yield per acre. In table 45 the relation of the amount of seed used per acre to yield is shown. In the Madison area, the growers getting the highest yields used the most seed per acre. In Erie County, however, the growers using the average amount of seed obtained the highest yields. Farmers planting less than the average amount in each area obtained the lowest yields per acre.

TABLE 45. RELATION OF AMOUNT OF SEED USED PER ACRE, TO YIELD PER ACRE, 120 NEW YORK FARMS, 1925

| Number of bushels of seed used per acre | Number of farms | Acres of peas | Bushels of seed per acre | Yield per acre, in bushels |
|---|---|---|---|---|
| Erie County, 63 farms | | | | |
| 3 bushels or less | 23 | 96.08 | 2.65 | 72 |
| From 3 to 4 bushels | 20 | 145.53 | 3.42 | 109 |
| More than 4 bushels | 20 | 105.75 | 4.09 | 76 |
| All farms | 63 | 347.36 | 3.41 | 89 |
| Madison area, 57 farms | | | | |
| Less than 2 bushels | 7 | 97.0 | 1.78 | 92 |
| 2 bushels | 42 | 416.8 | 2.00 | 124 |
| More than 2 bushels | 8 | 92.0 | 2.59 | 139 |
| All farms | 57 | 605.8 | 2.02 | 121 |

The two areas are quite distinct in the amount of seed sown per acre. In the Madison area, 7 growers used less than 2 bushels, 42 growers used exactly 2 bushels, and 8 growers used more than 2 bushels. The average yield per acre for the three groups was 92, 124, and 139 bushels, respectively.

In a prior study of market peas grown on 106 farms in Madison County,[6] 22 of 86 farmers reporting used 1.75 bushels of seed per acre, 51 used 2 bushels of seed per acre, and 13 used 2.25 bushels of seed per acre. The yields of peas averaged 99 bushels, 131 bushels, and 132 bushels per acre, respectively. This indicates that in Madison County higher yields can be obtained with a heavier seeding than with the average rate of 2 bushels per acre.

In Erie County, where the peas are not planted in rows as in the Madison area, there were 23 growers who planted 3 bushels of seed per acre or less, 20 growers who planted from 3 to 4 bushels per acre, and 20 growers who planted more than 4 bushels per acre. The yields per acre for these different rates of seeding were 72, 109, and 76 bushels, respectively.

In the Erie area the highest rates of seeding did not result in the highest yields per acre. Growers producing the highest yields used the average rate of seeding of from 3 to 4 bushels per acre.

[6] A study of market peas. By T. H. Townsend. Department of Vegetable Gardening, New York State College of Agriculture. 1922.

FACTORS AFFECTING THE COST OF PRODUCING MARKET PEAS

The great variation found in the cost of producing market peas suggests the possibility for individual growers to reduce their costs. That they may do this intelligently, a knowledge of the factors affecting the costs of production is necessary.

*Acres of peas per farm, and costs*

Size of business has been found to be a very important factor affecting profits in farming. In the production of market peas the number of acres that can be grown by one farmer limits the profits that can be made from that enterprise.

The variation in the acreage of market peas in the two areas studied is shown in table 46. In Erie County the acreage varied from 0.3 acre to

TABLE 46. VARIATIONS IN THE ACREAGE OF MARKET PEAS ON 120 NEW YORK FARMS, 1925

| Acres of peas per farm | Number of farms | | | |
|---|---|---|---|---|
| | Erie County | Madison County | All farms | Accumulative |
| 0.3 | 2 | ..... | 2 | 2 |
| 0.5 | ..... | 2 | 2 | 4 |
| 0.7 | 1 | ..... | 1 | 5 |
| 0.8 | 1 | ..... | 1 | 6 |
| 1.0 | 1 | 4 | 5 | 11 |
| 1.2 | ..... | 1 | 1 | 12 |
| 1.3 | 1 | ..... | 1 | 13 |
| 1.5 | 4 | 1 | 5 | 18 |
| 2.0 | 10 | 7 | 17 | 35 |
| 2.5 | 4 | 2 | 6 | 41 |
| 3.0 | 7 | 4 | 11 | 52 |
| 3.5 | 3 | 2 | 5 | 57 |
| 4.0 | 3 | 8 | 11 | 68 |
| 4.5 | ..... | 1 | 1 | 69 |
| 5.0 | 5 | 2 | 7 | 76 |
| 5.8 | 1 | ..... | 1 | 77 |
| 6.0 | 3 | 3 | 6 | 83 |
| 7.0 | ..... | 2 | 2 | 85 |
| 8.0 | 4 | 2 | 6 | 91 |
| 9.0 | 1 | ..... | 1 | 92 |
| 10.0 | 2 | 1 | 3 | 95 |
| 11.0 | 2 | ..... | 2 | 97 |
| 11.5 | ..... | 1 | 1 | 98 |
| 12.0 | 1 | 3 | 4 | 102 |
| 13.0 | 1 | ..... | 1 | 103 |
| 14.0 | 2 | 2 | 4 | 107 |
| 15.0 | 1 | ..... | 1 | 108 |
| 17.0 | 1 | ..... | 1 | 109 |
| 18.0 | ..... | 1 | 1 | 110 |
| 18.7 | 1 | ..... | 1 | 111 |
| 22.0 | ..... | 1 | 1 | 112 |
| 28.0 | 1 | ..... | 1 | 113 |
| 30.0 | ..... | 1 | 1 | 114 |
| 34.0 | ..... | 1 | 1 | 115 |
| 40.0 | ..... | 3 | 3 | 118 |
| 56.0 | ..... | 1 | 1 | 119 |
| 100.0 | ..... | 1 | 1 | 120 |
| Total | 63 | 57 | 120 | |

28 acres per farm, with an average of 5.5 acres. The commonest size was 2 acres, with 3 acres ranking next. In the Madison area the market-pea acreage varied from 0.5 acre to 100 acres per farm, with an average of 10.6 acres. The commonest acreage in this area was 4 acres, with 2 acres ranking next. For all the farms, 2 acres of peas was the commonest size (with 17 growers), while 3 and 4 acres came next (with 11 growers each). The average acreage for all farms was 7.94 acres.

The relation of the acres of peas per farm to the costs and the returns in the Erie and Madison areas is shown in table 47. In general, the costs per acre were lowest on the farms with the largest pea acreage. There were some variations from this relation, due to differences in yield per acre, in land values, and in methods of harvesting and marketing.

TABLE 47. RELATION OF ACRES OF MARKET PEAS PER FARM, TO COSTS, RETURNS, AND OTHER FACTORS, 120 NEW YORK FARMS, 1925

| Item | Erie County | | | Madison area | | |
|---|---|---|---|---|---|---|
| | Acres per farm | | | Acres per farm | | |
| | Less than 3 | From 3 to 6 | 6 or more | Less than 3 | From 3 to 6 | 6 or more |
| Number of farms | 24 | 19 | 20 | 17 | 17 | 23 |
| Acres of peas per farm | 1.68 | 3.91 | 11.64 | 1.57 | 3.85 | 22.33 |
| Cost of growing peas: | | | | | | |
| Per acre | $68 | $78 | $73 | $52 | $44 | $46 |
| Per bushel | $0.72 | $0.97 | $0.80 | $0.37 | $0.33 | $0.39 |
| Cost of picking: | | | | | | |
| Per acre | $41 | $35 | $34 | $56 | $54 | $45 |
| Per bushel | $0.44 | $0.43 | $0.38 | $0.40 | $0.40 | $0.38 |
| Cost of harvesting: | | | | | | |
| Per acre | $12 | $10 | $11 | $6 | $7 | $7 |
| Per bushel | $0.13 | $0.12 | $0.12 | $0.04 | $0.05 | $0.06 |
| Cost of marketing: | | | | | | |
| Per acre | $69 | $58 | $63 | $81 | $92 | $88 |
| Per bushel | $0.74 | $0.71 | $0.69 | $0.58 | $0.68 | $0.74 |
| Total cost (net): | | | | | | |
| Per acre | $188 | $178 | $179 | $193 | $193 | $185 |
| Per bushel | $2.01 | $2.20 | $1.98 | $1.37 | $1.43 | $1.57 |
| Gross sales: | | | | | | |
| Per acre | $228 | $218 | $228 | $306 | $307 | $266 |
| Per bushel | $2.44 | $2.70 | $2.53 | $2.17 | $2.27 | $2.26 |
| Net profit: | | | | | | |
| Per acre | $40 | $40 | $50 | $113 | $114 | $81 |
| Per bushel | $0.43 | $0.50 | $0.55 | $0.80 | $0.84 | $0.69 |
| Yield per acre (bushels) | 93 | 81 | 90 | 141 | 135 | 118 |
| Returns per hour, except for picking | $1.64 | $1.84 | $2.65 | $3.63 | $4.35 | $3.86 |
| Acres plowed by horses | 30.4 | 28.5 | 64.0 | 25.8 | 56.5 | 222.0 |
| Acres plowed by tractors | 10.0 | 28.5 | 169.0 | 1.0 | 9.0 | 292.0 |
| Per cent plowed by horses | 75.2 | 61.6 | 27.5 | 96.0 | 86.0 | 43.0 |
| Per cent plowed by tractors | 24.8 | 38.4 | 72.5 | 4.0 | 14.0 | 57.0 |
| Plowing cost per acre | $4.70 | $3.75 | $4.70 | $4.70 | $3.90 | $4.50 |

TABLE 48. RELATION OF YIELD OF PEAS PER ACRE, TO COSTS AND RETURNS, 120 NEW YORK FARMS, 1925

| Bushels of peas per acre | Number of farms | Acres of peas | Yield per acre, in bushels | Cost of growing, per acre | Cost of picking, per acre | Cost of other harvesting, per acre | Cost of marketing, per acre | Net cost of crop, per acre | Gross sales, per acre | Profit or loss, per acre |
|---|---|---|---|---|---|---|---|---|---|---|
| Erie County: | | | | | | | | | | |
| Less than 75 | 24 | 130.3 | 54 | $70.77 | $23.32 | $ 7.36 | $36.76 | $136.78 | $125.95 | -$ 10.83 |
| From 75 to 125 | 25 | 134.6 | 92 | 75.39 | 37.43 | 11.09 | 64.58 | 186.46 | 245.97 | + 59.51 |
| 125 or more | 14 | 82.5 | 139 | 73.91 | 49.77 | 15.67 | 99.66 | 236.49 | 352.57 | + 116.08 |
| All farms | 63 | 347.4 | 89 | $73.31 | $35.07 | $10.78 | $62.48 | $179.72 | $226.29 | + $46.57 |
| Madison area: | | | | | | | | | | |
| Less than 100 | 16 | 254.5 | 81 | $39.35 | $29.19 | $5.13 | $ 62.03 | $134.41 | $168.46 | +$ 34.05 |
| From 100 to 150 | 18 | 198.0 | 121 | 50.18 | 47.50 | 8.10 | 88.51 | 192.11 | 289.55 | + 97.44 |
| 150 or more | 23 | 153.2 | 186 | 51.54 | 73.71 | 9.31 | 129.84 | 262.78 | 422.04 | + 159.26 |
| All farms | 57 | 605.7 | 121 | $46.14 | $46.44 | $7.33 | $87.84 | $185.91 | $272.19 | + $86.28 |

Altho on the very large farms in the Madison area the average yields were low due to blight conditions, the growers with 6 or more acres of peas per farm earned more per hour spent on peas than did the growers with less than 3 acres per farm.

The relation of the acres of peas per farm to costs and returns per bushel is influenced so much by yield per acre that the farms with large acreages did not always have lower costs per bushel. In the Madison area the farms with small acreages — mostly valley farms — had the largest yields, and the very large growers — mostly on hill land — obtained the lowest yields, per acre. As a result, the total costs per bushel were lowest on the farms with small market-pea acreage.

In Erie County the yields were nearly the same in the three groups, and so the costs per bushel did not vary much on farms with small and with large acreages of peas.

The relation of the acres of peas to the proportion of the land plowed by horses and by tractors, also is shown in table 47. In both Erie County and the Madison area, the farms with a small pea acreage had the highest costs of plowing per acre. The groups with from 3 to 6 acres of peas per farm had the lowest cost of plowing per acre, while the farms with the largest acreages had next to the highest costs per acre. This peculiar relation is the result of two factors. First, the costs tend to get lower as the unit of operation increases in size, and hence the small acreages have the highest costs. Secondly, tractors were used more extensively on the larger farms than on the smaller farms. The tractor work cost more per acre of plowing than did the horse work, and hence the increased cost due to the use of tractors more than offset the lower costs due to the advantage of size.

### *Relation of yield per acre to costs*

The costs per acre and per bushel are very closely related to the yield per acre. The effect of the yield on the costs and the returns is shown in table 48. In both areas all the costs per acre, except the cost of growing, increase proportionately with the higher yields per acre, for the different groups. The gain per acre also was greater on the farms with higher yields, even tho the costs were higher. This is what one might expect in a year of high prices, such as 1925. At an average price above $2 per bushel for the season, the more peas a farmer had to sell, the better off he was. However, with very low prices per bushel the growers with the highest costs would probably have greater losses than would other growers. Under normal conditions, yields higher than the average are profitable.

### *Relation of charge for use of land, to costs*

The quality of the land on which the peas are grown affects the yield and the cost per acre. The relation of the charge for use of land to these items in the two market-pea areas is shown in table 49. In the Madison area the higher yields were obtained, and the costs were higher, on the better farms, where the values per acre were higher. In Erie County the costs per acre were higher on the farms with the higher land charges. The yields were highest on the highest-land-charge farms, but they were about the same for the lowest- and the average-land-charge farms.

TABLE 49. RELATION OF CHARGE FOR USE OF LAND, TO COST PER ACRE AND TO YIELD PER ACRE, 120 NEW YORK FARMS, 1925

| Charge per acre for use of land | Number of farms | Cost per acre | Yield per acre, in bushels |
|---|---|---|---|
| Erie County: | | | |
| $8.60 and less | 23 | $ 26.27 | 87 |
| From $8.60 to $17.20 | 25 | 89.27 | 85 |
| More than $17.20 | 15 | 229.72 | 95 |
| All farms | 63 | $99.71 | 89 |
| Madison area: | | | |
| Less than $6 | 19 | $ 33.96 | 93 |
| From $6 to $7 | 13 | 48.03 | 129 |
| More than $7 | 25 | 130.39 | 136 |
| All farms | 57 | $79.46 | 121 |

*Proportion of early and late varieties of peas, in relation to costs*

The relation of the percentage of the total pea crop planted to early varieties, to the costs and returns and the yield per acre, is shown in table 50. In Erie County the growers having less than 25 per cent of their crop in early varieties obtained a yield of 61 bushels per acre. Growers with from 25 per cent to 50 per cent in early varieties obtained a yield of 99 bushels per acre, but growers with more than 50 per cent in early varieties obtained yields of only 64 bushels per acre. The costs per acre and the net returns per acre were in the same proportion as the yields in the different groups.

TABLE 50. RELATION OF PERCENTAGE OF THE TOTAL PEA CROP IN EARLY VARIETIES, TO COSTS AND RETURNS AND TO YIELD PER ACRE, 116 NEW YORK FARMS, 1925

| Per cent of acres in early varieties | Number of farms | Number of acres | Average per cent | Yield per acre, in bushels | Cost per acre | Net gain per acre |
|---|---|---|---|---|---|---|
| Erie County (62 farms): | | | | | | |
| Less than 25 | 23 | 11.45 | 5.2 | 61 | $160.38 | $13.41 |
| From 25 to 50 | 14 | 38.77 | 33.1 | 99 | 199.00 | 79.90 |
| More than 50 | 25 | 64.75 | 69.2 | 64 | 166.09 | 30.15 |
| All farms | 62 | 114.97 | 37.3 | 76 | $175.33 | $41.46 |
| Madison area (54 farms): | | | | | | |
| Less than 25 | 14 | 21.50 | 5.0 | 104 | $143.43 | $ 43.73 |
| From 25 to 50 | 20 | 75.25 | 35.2 | 128 | 182.46 | 78.13 |
| More than 50 | 20 | 74.25 | 64.1 | 122 | 185.89 | 108.03 |
| All farms | 54 | 171.00 | 38.1 | 122 | $170.54 | $74.66 |
| New York (116 farms): | | | | | | |
| Less than 25 | 37 | 32.95 | 5.1 | 89 | $149.79 | $32.35 |
| From 25 to 50 | 34 | 114.02 | 34.4 | 118 | 187.94 | 78.72 |
| More than 50 | 45 | 139.00 | 66.9 | 95 | 177.28 | 74.15 |
| All farms | 116 | 285.97 | 37.7 | 104 | $172.34 | $62.18 |

In the Madison area the yields were higher and the costs and net returns greater on the farms having more than 25 per cent of their crops in early varieties. This was due to the low prices and the low yields due to blight for most of the late peas, and to the relatively high prices received for the early peas.

## MARKETING OF GREEN PEAS

### PRIMARY AND SECONDARY MARKETS

The larger cities, which receive peas in car-load lots and maintain markets where the peas are sold on a wholesale basis to jobbers, retailers, chain stores, and street venders, are referred to in this bulletin as *primary markets*. The smaller cities and towns, which get their supplies of peas from jobbers and wholesalers in the primary markets or from local gardeners, are referred to as *secondary markets*.

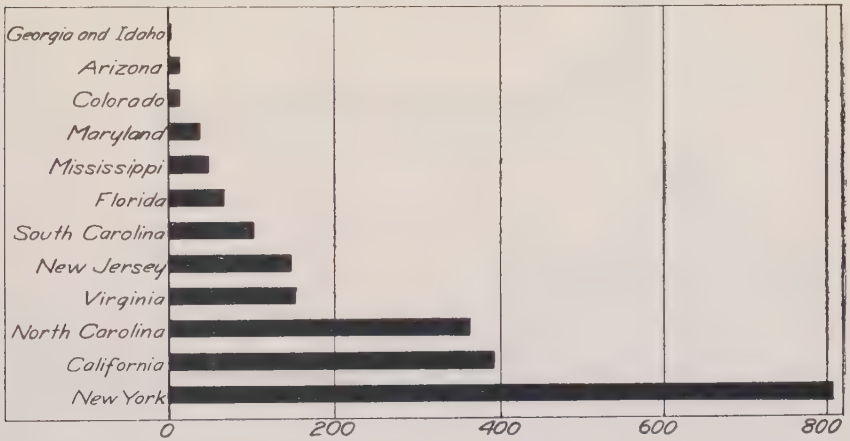



FIGURE 6. CAR-LOT ARRIVALS OF GREEN PEAS IN NEW YORK CITY, BY STATES OF ORIGIN, 1925

(From Market Reports, Bureau of Agricultural Economics, United States Department of Agriculture)

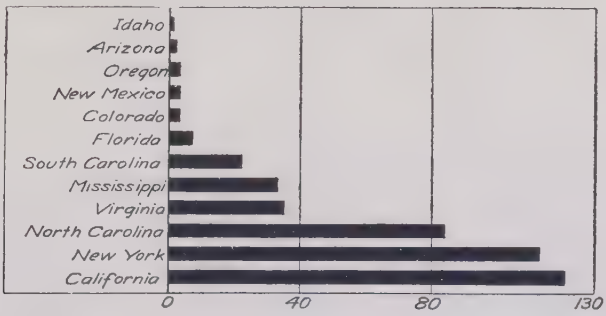



FIGURE 7. CAR-LOT ARRIVALS OF GREEN PEAS IN PHILADELPHIA, BY STATES OF ORIGIN, 1925

(From Market Reports, Bureau of Agricultural Economics, United States Department of Agriculture)

New York City and Philadelphia are the two main primary markets for green peas. In 1925 there were 2285 cars of peas unloaded in New York City, and 427 cars in Philadelphia. The total of these two (2712 cars) is 78 per cent of the total production of peas (3486 cars) in the United

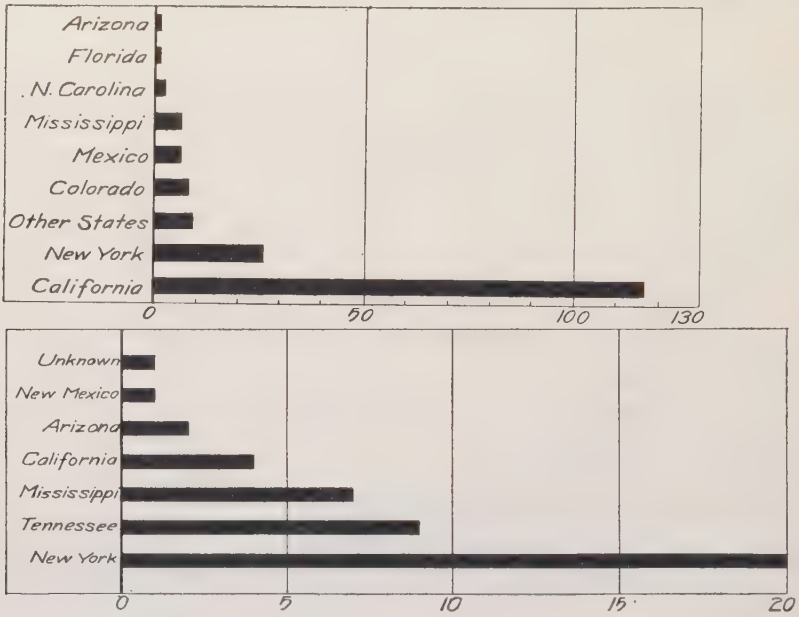



FIGURE 8. CAR-LOT ARRIVALS OF GREEN PEAS IN CINCINNATI IN 1925 (UPPER) AND IN CHICAGO IN 1924 (LOWER), BY STATES OF ORIGIN
(From Market Reports, Bureau of Agricultural Economics, United States Department of Agriculture)

States as reported by the Bureau of Agricultural Economics, United States Department of Agriculture, for the year 1925.

The car-lot and less-than-car-lot receipts (in car-lot equivalents) of green peas in some other primary markets for 1925 — except for Chicago, in which case the 1924 figures were used — are given in table 51. Data

TABLE 51. RECEIPTS OF GREEN PEAS IN IMPORTANT PRIMARY MARKETS*

| Year | Market | Number of cars of peas |
|---|---|---|
| 1925 | New York City | 2,285 |
| 1925 | Philadelphia | 427 |
| 1925 | Cincinnati | 44 |
| 1924 | Chicago | 176 |
| | Total | 2,932 |
| Total production in United States in 1925 (1,743,000 bushels) | | 3,486 |

* From Bureau of Agricultural Economics, United States Department of Agriculture.

for the remaining primary markets are not available, as no records are kept by them.

The relative car-lot and less-than-car-lot receipts in New York City for the years 1923, 1924, and 1925 are given in table 52.

TABLE 52. CAR-LOT AND LESS-THAN-CAR-LOT RECEIPTS OF GREEN PEAS IN NEW YORK CITY, 1923 TO 1925

| Year | Car-lot receipts | | Less-than-car-lot receipts | | Total receipts | |
|---|---|---|---|---|---|---|
| | Cars | Per cent | Cars | Per cent | Cars | Per cent |
| 1923 | 746 | 46 | 886 | 54 | 1,632 | 100 |
| 1924 | 1,275 | 51 | 1,226 | 49 | 2,501 | 100 |
| 1925 | 1,559 | 68 | 726 | 32 | 2,285 | 100 |
| Total | 3,580 | 56 | 2,838 | 44 | 6,418 | 100 |

New York and Philadelphia are the only markets where peas are sold every month in the year. The relatively large quantity of peas handled by both of these markets is also a greater assurance that a car of peas will be sold when received. The amount of peas that can be marketed in one day in any of the other primary markets is limited. One or two cars of peas affect the market situation greatly. Accordingly, prices fluctuate widely and often very sharply. As a result, shippers take greater chances in shipping to these other primary markets; they might obtain a higher price, and they might suffer a great loss. Consequently, only cooperative associations and large growers distribute their shipments to the various markets. Small growers shipping independently usually find it safer to ship to a reliable commission firm in one of the two main markets.

There are numerous secondary markets for green peas. Every city or town that is large enough to have a fruit and vegetable store, or even only a grocery store in many cases, has green peas for sale during the pea season. In New York State many of these secondary markets now get their peas by truck direct from the producing regions. One local shipper in the Madison area trucked peas as far as Scranton and Wilkes-Barre, Pennsylvania, in 1925. Others regularly supplied Syracuse, Utica, Cortland, Ithaca, Elmira, Binghamton, and other cities.

Around most of these larger cities are also found a few market gardeners with regular customers in the city who depend on them almost entirely for many fruits and vegetables. Some of these market gardeners have greenhouses where they grow many vegetables out of season, in order to more fully supply their customers the year round.

No reliable data are available for the amount of peas consumed in these secondary markets. Local newspapers often run price quotations for peas during the green-pea season, but very few of them keep any record of the quantities sold each day.

## NECESSARY AGENCIES AND FUNCTIONS IN MARKETING GREEN PEAS

To get the peas from growers' fields scattered over ten different States, into the hands of city consumers, requires a network of marketing agencies. The local shipper, local representative of a city selling agency, or local farmers' cooperative association, forms the first link in the marketing chain. The function of this agent is primarily one of assembling the peas for shipment, from several growers so as to have enough for a carload. In this way better transportation rates are obtained, the advantages of refrigeration are secured, and many economies in loading and unloading in the city are made possible.

The next necessary agency is the railroad. The production of peas in Colorado for the New York market, for example, is possible only because of the excellent transportation services available today.

Arriving at the terminal markets in car lots of 500 bushel baskets each, the peas must be unloaded, trucked to the wholesale market, and sold in lots of from 15 to 20 bushels mostly to jobbers, who in turn sell to retailers in lots of from 1 to 3 bushels each. Then the retailer must have the peas trucked to his place of business, and must further subdivide the amount purchased from the jobber into small packages of from 1 to 5 pounds for each customer.

A car of peas is thus sold and distributed to approximately 5000 consumers widely scattered thru the city. To perform this service in the most economical way, and yet satisfy the varying demands of the individuals who ultimately pay for the service, requires agencies specialized in the particular functions which they perform.

Involved in the marketing of peas, therefore, are the following agencies: country shipper (private dealer, local agent of some commission firm, or cooperative association), transportation company, city transfer or trucking company, commission firm or wholesale house, jobber, and retailer. The functions of each are distinct and are apparently necessary under our present economic system. Whether the chain can be shortened and some of the steps eliminated in the future is a matter of conjecture. Considering the tendency for our population to concentrate in large cities, it seems more likely that the marketing organization will become more complex rather than more simple or direct.

## METHODS OF MARKETING AT COUNTRY SHIPPING POINTS

### *Shipping direct*

In the Madison area, most of the growers ship their market peas direct to a wholesale commission firm which sells the peas on a 10-per-cent-commission basis. The wholesale house usually has a local representative who solicits business for them and attends to the loading and clerical work at the country point. For this service the representative usually receives 3 per cent of the 10-per-cent commission, out of which he must pay all costs at the country point, including extra help for loading cars, telephone and telegraph, and other expenses.

This practice results in strong competition among the wholesale houses for the growers' business. Each morning the local representatives of the various wholesale companies get telegraphic reports of sales on the all-

night market. These reports are telephoned out to growers or reported to them personally by the wholesalers' agents. With market reports each morning from several agents, the grower can compare for himself the variation in the prices received by different commission firms. If a certain wholesale house seems to be consistently getting a higher price than other companies, growers soon give this company their business.

This freedom of action puts the selling agency on test, as it were, every day. If a firm's night salesman cannot get a price as high as salesmen of other companies are getting, it soon loses its business to competing firms.

None of the selling agencies can get higher prices than their competitors every day. The firm reporting sales with highest prices one day may be the very lowest the next day. This could happen easily thru a variation in the grade of peas received, or as a result of misjudging the market. Salesmen sometimes start with an asking price too high in view of the supply-and-demand situation. Before they have come to realize the real strength of the market, most of the better class of buyers have made their purchases. Hence, in order to sell the peas at all after the mistake is realized, prices have to be reduced below the normal selling price of that day.

Occasionally, reports of sales are not sent out just as they actually happen. Some of the less reliable commission firms, in their endeavor to secure new business, have reported sales to growers — and paid them accordingly — at 25 to 50 cents per bushel higher than the actual sale. This practice is known to growers as "baiting." It can be done only on small shipments, and usually when it is known that peas are being shipped by the same grower to two or more commission firms so that the chance for comparison is ideal. A wholesale house could not do much "baiting" and stay in business, selling on a 10-per-cent margin. Such losses would have to be made up in later reports to the same grower or to other growers. Instances are on record in which such irregularities have occurred. In one case, peas from a certain grower who was known to object frequently to low prices, did actually sell for a very low price. But the commission firm, fearing it would lose his business, reported a price to him higher than the peas actually sold for, and made up the difference on sales of another grower whose peas sold for a higher price on that market.

Such irregular practices by a few unreliable firms tend to lessen the confidence which growers have in the entire wholesale market. They can never be quite sure, when their sales are reported, whether the price received was actually the price for which the peas were sold, or whether it was the result of manipulation. Growers become critical and suspicious every time that their peas sales are reported at a lower price than the price received by their neighbor. Such a feeling of suspicion and lack of confidence by growers toward the wholesale business is very unfortunate for the reliable wholesalers. When the market does react adversely, necessitating reports of sales at low prices to some customers, it may result in the permanent loss of their patronage in the future. However, the reliable wholesalers win out in the long run. When a grower finds a commission firm that he can depend on and have confidence in, he soon becomes a permanent customer of that firm.

But, while the method of shipping direct is open to irregularities due to the keen competition between selling agencies, it results also in the marketing service in general being performed very efficiently and economically. Under such competitive pressure the selling agencies undoubtedly get higher prices for the peas, and perform the service of selling for a narrower margin, than would be the case under less competitive conditions.

In Erie County, due to the greater distance from market, inferior transportation facilities, and the strength of the growers' marketing association, very little direct shipping is done. The peas are either shipped thru the association, trucked to Buffalo, and sold on the public market, or sold outright to a local shipper.

*Selling to local shippers*

In the Madison area a few local shippers buy peas from the growers at a specified price per bushel at the farm. The local shipper then trucks them to a secondary market where he has established selling connections. Occasionally, he ships direct to one of the primary markets as an independent grower does.

In most instances where the local shipper buys for a secondary market, he has a price quotation and an order for a given quantity of peas before he purchases from the grower. But when he ships to a primary market, he must take a chance on a rise or a fall in the market. If he buys on a rising market he profits, but if the market breaks he may lose heavily.

Shippers who handle many peas in this manner expect some losses, but aim to come out at the end of the season with a profit. To do this they must watch the market situation very carefully, be conservative in their purchase price, and avoid purchases on a falling market. That this is extremely difficult to do, is evidenced by the scarcity of local shippers. Where the growers have complete market reports every morning and know the costs of shipping as well as the shipper does, a local shipper rarely offers the grower a price for his peas higher than he could get by shipping. Most growers are in practically as good a position to run the risk of price fluctuations as is the local shipper.

In Erie County, local shippers handle most of the peas shipped by growers who are not members of the local cooperative association. But, since most of the peas grown in this area are either trucked to Buffalo or shipped thru the association, the percentage of peas sold to local shippers is relatively very small.

*Selling on a contract or a share basis*

Another method of marketing green peas in the Madison area is for growers to contract their crop to individuals who specialize in growing and shipping peas. A number of variations in the form of contract are found.

One arrangement is that by which farmers contract with shippers to grow the peas for 50 cents per bushel. In this case the shipper does the picking and marketing, and assumes the risks of price fluctuations. This method transfers some of the risks from the grower to the contractor, but also limits the possibilities for profit for the grower. In years of high yields, the grower does well while the contractor may not do so well.

If prices are low, as they frequently are in years of high production, the contractor loses, for his costs are practically fixed, regardless of price. The picking, harvesting, and marketing costs are all on a bushel basis, the same as the 50-cents-per-bushel contract price. Hence, higher yields more often result in a loss rather than a gain to him. Low yields, on the other hand, mean less money to the grower, but may mean substantial gains to the contractor if prices rule high. In many cases, therefore, this method of selling merely divides the risk, so that one contracting party gets the benefit one year and the other party the next year. Except in special cases, it is difficult to see how the average grower would benefit much by such an arrangement.

Another type of arrangement is somewhat like share-rental. The farmer furnishes the land and does all of the work in growing the peas; shares in the cash expenses of seed, fertilizer, picking, and marketing; and shares in the gross receipts of the crop. The other party looks after the picking and marketing entirely, for which he gets half of the gross sales, less half of the cash expenditures. Under this arrangement the risk is distributed between the two parties — both benefiting in good years, and both sharing proportionately losses resulting from adverse conditions. A number of large growers use this method very successfully. It relieves the grower of the picking and marketing worry, so that he can continue his other farm work. The other party finds it both economical and profitable to have several fields of peas, so that he can afford to get a colony of pickers for the season. This of course necessitates sufficient work to keep them continuously employed. Besides, if one has sufficient volume he can become a local agent for a commission firm, thus getting a selling rate of 7 per cent instead of the regular 10 per cent to individual shippers.

In another variation of contract marketing, the farmer sells his market-pea crop in the field before the peas are picked, for a cash price per acre. If the yield turns out better than expected and the price is higher at harvest time, the farmer may lose and the contractor gain by the deal. But if the peas blight before they are picked and the price slumps at harvest time, the farmer may get more than he would have otherwise received. In 1925, several growers who sold their crops standing received more for their peas than the gross sales amounted to, without having to bear any of the expense of picking, harvesting, or marketing. These circumstances, of course, were the result of a combination of blight from wet weather and low prices for poor-quality peas.

In general, this method does not work out so well. Usually one party loses while the other party gains. But there are occasions when a farmer finds it advantageous or necessary to sell his crop in the field. The individual, however, who buys the peas must make his offer low enough to take care of possible losses thru crop failure or price change. Consequently, possibilities for either large losses or large profits are necessarily limited.

*Marketing thru cooperative associations*

Nearly all of the Erie County market peas, and approximately half of the peas produced in the Madison area, are marketed thru some form of cooperative marketing organization.

*Erie County Growers' and Shippers' Association, Inc.*

*Organization and history.* The Erie County Growers' and Shippers' Association, Inc., located at Orchard Park, New York, was organized in 1908 with 325 members. The association was incorporated for $5000 at $5 per share, with a premium of $5, later raised to $10 and now up to $15. Each grower owns one or more shares; only one grower in the association holds as many as ten shares.

New members are called "trial members" and are given four years

FIGURE 9. OFFICE BUILDING OF THE ERIE COUNTY GROWERS' AND SHIPPERS' ASSOCIATION, INC., ORCHARD PARK, NEW YORK

in which to pay for their stock and premium, which amounts to $20 per grower if he takes one share of stock.

Only one dividend has been declared since the association was organized, as the members have each year voted that all net earnings be left with the organization to build up a reserve. When the reserve gets large enough, the policy of the present management is to distribute the earnings to growers thru an indirect form of patronage dividend. That is, the excess earnings of one year are converted into losses the next year thru sale of seed, baskets, or supplies to growers at less than cost. Likewise, if the budget does not quite balance, rather than make an assessment or change the per-unit association fee the growers are charged enough extra for their supplies the following year to offset the deficit of the previous year.

The association now comprises approximately 95 per cent of the market gardeners of the region, with a total membership of about 600 scattered over seven townships.

*Method of selling.* The association acts as a shipping agency for its growers. Green peas, cauliflower, cucumbers, potatoes, and other vegetables are shipped in carload lots to the primary markets, where they are sold on commission. For green peas a fee of 6 cents per basket is charged to each grower, to cover costs of handling.

In most of the primary markets the association has arrangements with a particular commission firm which acts as an exclusive selling agent for its produce. In the New York market, for example, the Robert T. Cochrane Company handled all the market peas shipped by the Erie association in 1925.

Members of the association have a unique arrangement for selling their peas locally rather than thru the association, when they so desire. A clause in the by-laws permits members to sell any or all the produce that they can, either locally, or on the Buffalo public market, or to any one except a competing shipper. This permits growers to take advan-

FIGURE 10. ELK STREET PUBLIC MARKET, BUFFALO, NEW YORK

tage of the Buffalo market without breaking their contracts. In fact, it gives the grower a choice between selling locally or shipping to a primary market thru the association.

In practice, this arrangement works out very sucessfully. The advantage of having two markets instead of one has attracted approximately 95 per cent of the growers in this area into the association. It puts all responsibility of choice of market on the grower, leaving little for him to complain about. It also helps to steady the Buffalo market, since growers can quickly shift their produce in response to price fluctuations.

Where a cooperative association has such an alternative local market as Buffalo, and can give the growers a choice of marketing their produce where the price is most favorable, the five-year ironclad contract is unnecessary. Membership in such an organization grows naturally and does not require an iron fence to retain it.

Of course the management in the Erie association is responsible for

much of the success of this arrangement. Had the managers been less capable, it is entirely possible that such a privilege might have been a source of trouble rather than a stimulus for sound growth.

Another characteristic of the Erie association's method of selling is the practice of pooling the pea shipments daily. The peas are trucked to Orchard Park in bags, and are there classified into three or four grades, put into bushel hampers, and shipped as graded peas. The returns from the sale of the peas come to the association in one check. The net amount, after deducting all marketing costs and an association charge of 6 cents per basket, is divided among the growers according to the grades shipped on that particular day. The grades and method of payment are discussed later.

The advantage of the pooling method is that it permits the manager to ship the peas to various markets more freely, in order to take advantage of price changes and to avoid oversupplying any one market. In this way the losses and gains resulting from sales in different markets are more evenly distributed among all the growers. This is particularly true when several cars a day are being shipped. If only one car a day were shipped, the pool would have to cover several days or a week in order to be effective.

The chief disadvantage of the pool is the leveling effect on prices. Even with the grades as they are established, prices to individual growers are not very different for any particular pool. The premium for better-quality peas is thus partly destroyed. Likewise, the grower who has been particularly successful in finding the high-priced markets for his peas, must be content with a price based on the average sale, partly corrected for quality.

Growers with less inclination toward the marketing phase of pea production, however, find the pooling method very satisfactory. They get a price based on average sales plus a differential for better quality.

*Distribution of pea shipments.* The distribution of pea shipments by the Erie County Growers' and Shippers' Association, Inc., for the years 1924 and 1925, is shown in figure 12. An average for the two years shows that one-third of the peas went to Philadelphia and one-sixth to New York City. In other words, just one-half of the total shipments went

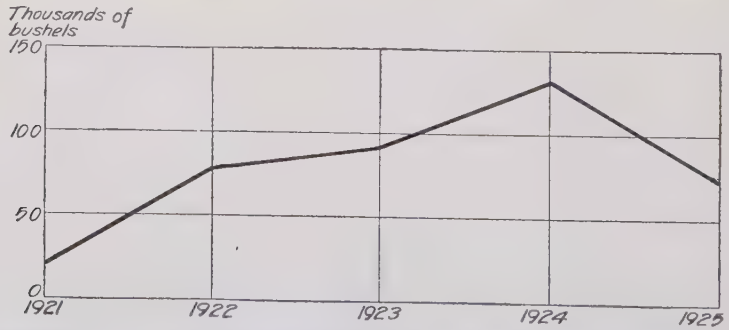



FIGURE 11. MARKET-PEA SHIPMENTS OF THE ERIE COUNTY GROWERS' AND SHIPPERS' ASSOCIATION, INC., 1921 TO 1925

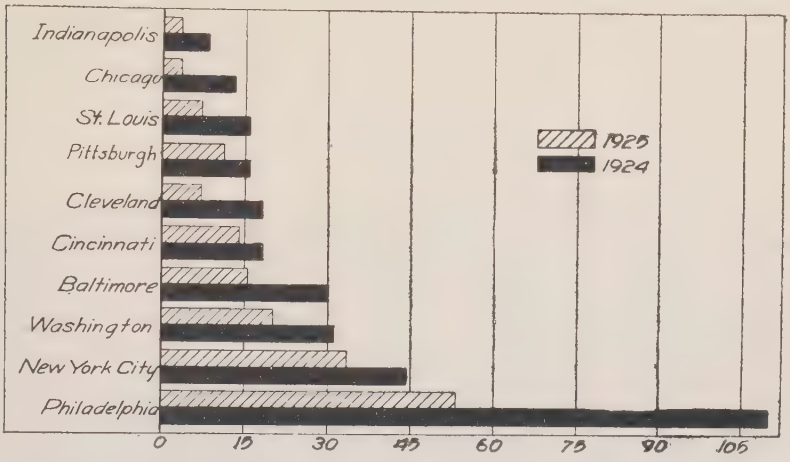



FIGURE 12. DISTRIBUTION OF CAR-LOT SHIPMENTS OF MARKET PEAS BY THE ERIE COUNTY GROWERS' AND SHIPPERS' ASSOCIATION, INC., 1924 AND 1925

to these two markets. The other half was distributed among eight other cities.

*Claims and losses.* Of 168 cars of peas shipped by the Erie association in 1925, 10 arrived at the terminal market in poor condition. Claims were filed with the transportation companies for the loss. The manager had received settlement on some of these claims by May, 1926, and estimated that he would eventually get a settlement of about 85 per cent of the market price on 6 of the 10 cars. Two of the cars were diverted from Philadelphia to New York, and were five days on the way due to a railroad strike. In this case the association got a full settlement, including the freight. Most claims, however, are for small amounts to cover the difference in the price that would have been received, had the peas arrived in time to sell on a certain market, when the delayed arrival resulted in their being sold on a weaker market.

The net loss in 1925 from all shipments, of which peas represented about 50 per cent, was $332, after all money received for claims had been accounted for.

*Services and savings.* A marketing organization, to be continuously successful, must either perform a necessary service or effect savings to its members, or do both. The Erie association serves its 600 members in the following ways:

1. By enlarging the grower's market.
2. By reducing transportation costs thru car-lot shipments.
3. By providing more complete market information at a low cost per unit.
4. By reducing and distributing losses from changes in market conditions, from delays in transit, and from dealings with unreliable shippers and wholesalers.
5. By permitting savings in purchases thru buying supplies in large quantities.

6. By obtaining lower commission rates from selling agencies in primary markets.

7. By making available better loading facilities and better transportation services.

8. By providing for the grading and pooling function.

*Madison Pea Shippers, Inc.*

The Madison Pea Shippers, Inc., of Hamilton, New York, was organized in 1916 with about 10 members. At the close of the 1924 season the organization ceased to operate. During the nine years of its existence the membership totaled 500. Growers became members simply by paying a fee of $1 and shipping their peas thru the association. There were no contracts to be signed.

The commission firm of A. C. Martin, in New York City, handled all shipments on the 10-per-cent basis and remitted direct to the growers. An association fee of 3 cents per package was deducted, in addition to the 10-per-cent selling commission. Of this 3 cents the railroad agent received 1 cent, and the other 2 cents went for telephone, telegraph, and office expense, and for the manager's salary.

In 1921 a surplus of between $2500 and $3000 was prorated back to members on a patronage basis.

In 1924 the manager received $500, plus $150 for the use of his car. The association paid $30 for office rent in that year, and employed a girl in the office for ten weeks at $10 per week.

Reasons for dissolution were given as follows: (1) Several large commission firms were endeavoring to get the growers' business. (2) The Poolville growers desired to grade and operate under contract, and so favored a separate organization. (3) The Morrisville growers wished neither to grade nor to sign long-term contracts, but desired to ship to more than one commission firm, and so they also effected a separate organization. (4) Other growers preferred to ship independently, and split their shipments among several commission firms in order to see which could do the best for them. (5) The one commission firm was unable to handle all the business satisfactorily.

These reasons could probably be summarized as follows: The association evidently did not improve on the services being rendered by the regular marketing agencies. In fact, the peas were not handled so well by the one selling agency as they would have been by several competing firms. Furthermore, there were no savings effected by the association. Growers had to pay the regular commission charge and an association fee besides.

In a field where the competition is so keen as in the marketing of peas, one could hardly expect an organization to operate long under such conditions and methods of marketing.

*Madison County Pea Growers Cooperative Association*

*Organization and history.* The Madison County Pea Growers Cooperative Association, at Poolville, was organized in 1923 with 53 members. By 1925, 10 new members had been added while 3 original members had withdrawn. Membership consists in signing a five-year contract to ship all peas thru the association.

During its first year the association became affiliated with the New York State Canners' Association, which failed that year. As a result of the failure, all affiliated growers were assessed $50 each, to pay off the indebtedness. This was a hard blow to the newly organized cooperative association, but in 1924 it managed to pay off the obligation completely. The members then signed new contracts for a five-year period and started over again, but not affiliated this time with any centralized selling organization.

*Method of selling.* The association operates similarly to the Erie association, except that the Poolville association does not pool its shipments but keeps each grower's lot separate thruout. The same commission firm in New York City acts as its representative, on the same 7-per-cent-commission basis. The returns are mailed to each grower, therefore, and show the number of bushels, the price, and the various deductions, such as for freight, cartage, commissions, baskets, and association charge.

In 1925 the association charge was 10 cents per basket, but at the end of the season the business had been so managed that a rebate of about 4 cents per bushel was returned to members. This was after paying in full for grading machinery installed that year, amounting to about $600.

TABLE 53. CAR-LOT SHIPMENTS OF MARKET PEAS BY THE MADISON COUNTY PEA GROWERS COOPERATIVE ASSOCIATION, 1924 AND 1925

| Destination | 1924 | | 1925 | |
|---|---|---|---|---|
| | Cars | Per cent | Cars | Per cent |
| New York City | 52 | 73 | 38 | 84 |
| Boston | 10 | 14 | 4 | 10 |
| Philadelphia | 6 | 9 | ..... | ..... |
| Baltimore | 3 | 4 | 1 | 2 |
| Pittsburgh | ..... | ..... | 2 | 4 |
| Total | 71 | 100 | 45 | 100 |

*Distribution of shipments.* The distribution of shipments of the Poolville association for the years 1924 and 1925 are shown in table 53 and in figure 13. Of all the peas, 73 per cent went to New York City in

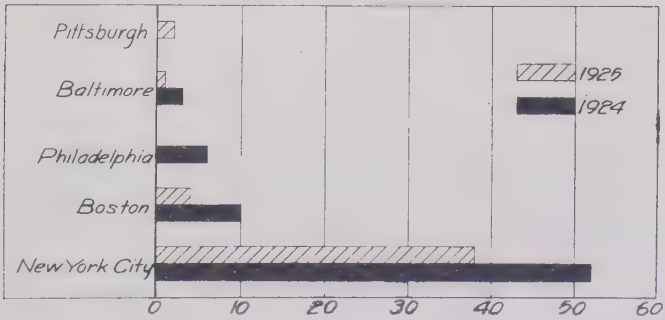



FIGURE 13. DISTRIBUTION OF CAR-LOT SHIPMENTS OF MARKET PEAS BY THE MADISON COUNTY PEA GROWERS COOPERATIVE ASSOCIATION, 1924 AND 1925

1924 and 84 per cent in 1925. In 1924 the remainder of the shipments went to Boston, Philadelphia, and Baltimore. In 1925, no car lots went to Philadelphia but two cars were shipped to Pittsburgh.

In addition to the 71 cars of peas shipped by freight in 1924, there were shipped by express the equivalent of 10 cars. In 1925, due to the lower yields there were only 45 cars shipped by freight and the equivalent of 9 cars by express.

*Claims and losses.* In 1924 the association filed claims on two cars for a total amount of $263. The peas were received in Philadelphia without ice, and hence arrived in poor condition. They were inspected, a report was filed with the claim, and a small adjustment was received. In 1925, claims were filed on 941 bushels of peas, approximately two cars. Settlement on these was still pending in November, 1925.

*Services and savings.* The Madison County Pea Growers Cooperative Association performs services and effects savings comparable to those accomplished by the Erie association. Briefly, they are as follows:

1. Transportation costs are reduced thru car-lot freight shipments in refrigerator cars.
2. Refrigerator shipments reduce losses due to delayed shipments and damage from over-heating.
3. Losses from dealings with unreliable shippers and wholesalers are reduced, if not eliminated.
4. Savings in purchases are effected thru the buying of supplies in large quantities.
5. Lower commission rates are obtained from commission houses.
6. Better loading facilities and better transportation services are made available.
7. Possibilities for grading are offered.

*Associated Pea Growers of Madison County*

*Organization and history.* The Associated Pea Growers of Madison County, at Morrisville, was organized in 1922 with 75 members. In 1925 the membership had grown to about 360.

A fee of 50 cents is all that is required for membership. No contracts are signed, and no restrictions whatever are put upon members. The success of the organization depends entirely upon the loyalty of its members. If the association, thru its management, is able to perform the marketing service satisfactorily to its members, it will continue to operate. But if the members find that there are no advantages to be gained in such an organization, it will be easy for them to break off and ship independently or reorganize on a different basis.

Four years is not long enough as a test for such a type of organization, but the evidence thus far is decidedly in its favor. The manager seems to have matters well under his control and the association appears to be functioning without much friction.

*Method of selling.* Perhaps the most characteristic feature of this association is the method of selling. Arrangements have been made with several large wholesale companies in New York City, Philadelphia, and other primary markets, to accept shipments from the association

FIGURE 14. LOADING MARKET PEAS, FOR CAR-LOT SHIPMENT, MORRISVILLE, NEW YORK

FIGURE 15. PEA PICKERS, PEA GROWERS, AND ASSOCIATION MANAGER, MORRISVILLE, NEW YORK

on the 7-per-cent-commission basis. No one company in any city has the exclusive selling agency, and yet they have consented to this plan.

When a grower brings his peas to the station he looks over the sales record of the day before, which shows the amount that each grower shipped, to whom he shipped, and the prices received. With this information, and plenty of rubber stamps handy with the names of different companies on them, the grower is free to choose the company to whom he will ship his peas. The manager is always consulted, however, and frequently suggests the company which he thinks can best handle the peas on that particular day. If a certain commission firm has been getting higher prices for the peas shipped to it, the grower may send his peas to that company to be sold. Or he may decide to send part of his shipment to one selling agency and part to another — "splitting," as it is called. In either case the commission firm handles the sale in the same way as if it came from an independent shipper, with one exception, mailing each grower a separate check for the amount of the sale less the costs of handling. The exception is that the commission firm, in deducting the handling costs, charges the grower the full 10-per-cent commission, and sends the association manager a separate check for the extra 3 per cent.

Out of this 3-per-cent saving in commission, 1 cent per package is supposed to be prorated back to members, and the remainder goes to the manager for his services and for telegrams and office expense.

*Distribution of shipments.* The distribution of shipments of the Morrisville association for the years 1924 and 1925 are shown in table 54 and in figure 16. As with the Poolville association, New York City is the

TABLE 54. CAR-LOT SHIPMENTS OF MARKET PEAS BY THE ASSOCIATED PEA GROWERS OF MADISON COUNTY, 1924 AND 1925

| | 1924 | | 1925 | |
|---|---|---|---|---|
| | Cars | Per cent | Cars | Per cent |
| New York City | 46 | 28 | 25 | 38 |
| Philadelphia | 38 | 23 | 22 | 33 |
| Chicago | 17 | 10 | 2 | 3 |
| Pittsburgh | 15 | 9 | 4 | 6 |
| Newark | 15 | 9 | 2 | 3 |
| Cleveland | 13 | 8 | 2 | 3 |
| Boston | 10 | 6 | 4 | 6 |
| Baltimore | 5 | 3 | 4 | 6 |
| Jersey City | 5 | 3 | ..... | ..... |
| St. Louis | 1 | 0.5 | ..... | ..... |
| Louisville | 1 | 0.5 | ..... | ..... |
| Providence, Rhode Island | ..... | ..... | 1 | 2 |
| Total | 166 | 100 | 66 | 100 |

main market for the Morrisville market peas. In 1924, 28 per cent of the car-lot shipments went to the New York market, and in 1925, 38 per cent. Philadelphia was second in importance, receiving 23 per cent of the shipments in 1924 and 33 per cent in 1925. The remainder of

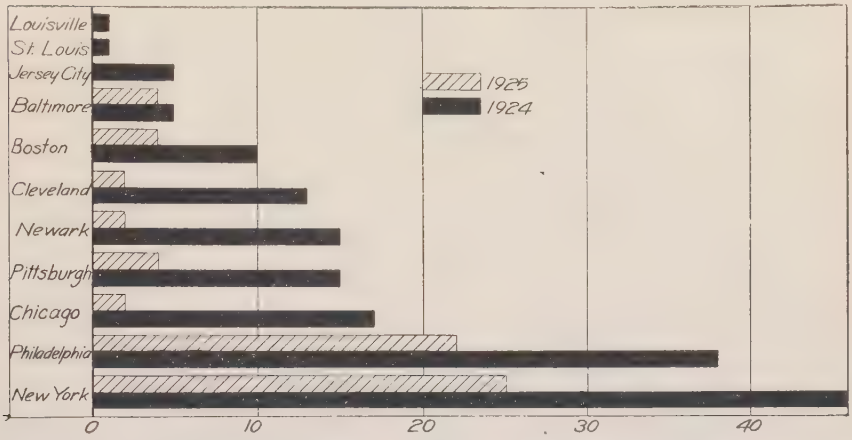



FIGURE 16. DISTRIBUTION OF CAR-LOT SHIPMENTS OF MARKET PEAS BY THE ASSOCIATED PEA GROWERS OF MADISON COUNTY, 1924 AND 1925

the car-lot shipments were distributed among nine other primary markets in 1924 and seven other markets in 1925.

The 1925 season, however, was very light as compared with the year before — 66 cars in 1925 and 166 cars in 1924. As with the other cooperatives, low yields were blamable for the great reduction in car-lot shipments in 1925.

*Services and savings.* The services and savings effected by the Morrisville association may be listed as follows:

1. Better transportation facilities at the shipping station are provided.
2. Losses are reduced thru car-lot freight shipments in refrigerator cars.
3. Losses from delayed shipments and from the peas arriving in poor condition are reduced.
4. Market information is provided at a low cost for each member.
5. Growers are given their choice as to the agency to which their peas are shipped, and responsibility in their choice.
6. One cent per package is saved on the commission rate, in addition to the expenses of the association being met without a regular association charge.

*Relative costs of operation of the cooperative marketing organizations*

The relative costs of operation of the three cooperative marketing associations are shown in figure 17. The 1925 costs were used for the Erie and Poolville associations; the 1924 costs were used for the Morrisville association, the 1925 costs not being available in full in time for this report.

The relative divisions of expenses are really not comparable for the three associations, because of their differences in size and in method of operation. The Erie association is a large corporation handling other fruits and vegetables, and employing a manager, a bookkeeper, and an inspector the year round. The Poolville association, on the other hand,

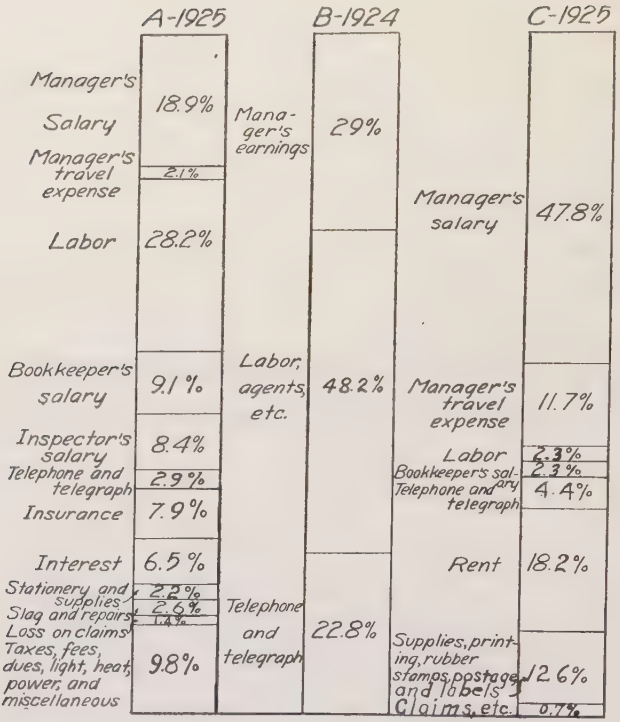



FIGURE 17. RELATIVE DIVISION OF EXPENSES OF THREE NEW YORK STATE MARKET-PEA COOPERATIVE ASSOCIATIONS

A, Erie County Growers' and Shippers' Association, Inc., Orchard Park; B, Associated Pea Growers of Madison County, Morrisville Station; C, Madison County Pea Growers Cooperative Association, Poolville

shipped only 54 cars of peas in 1925 as compared with 168 cars for the Erie association, and no other produce. Its manager is employed during the market-pea season only.

The Morrisville association is quite different from either of the other two, in that the manager works on a commission basis rather than for a salary. His earnings are dependent upon both the yields and the prices received for the peas, and is not a fixed cost regardless of conditions.

In each case, however, the portion of the total expense represented by the manager's salary, or earnings plus other labor, makes up more than half of the total cost of operation. Telegram and telephone expense was high for the Morrisville association but relatively small for the other two associations. The reason for this item being so high in the one case was probably that this association had an arrangement with the railroad agent for looking after the market reports and helping with the shipments, as the railroad station was about the only office maintained by the association. All shipments were received and all business was transacted at the station. Hence there was no rent charge reported by this association, as there was with the Erie and Poolville associations.

TABLE 55. SUMMARY OF GREEN-PEA SHIPMENTS FROM MORRISVILLE STATION IN 1925

| New York City commission firm | June | | | July | | | August | | | September | | | Total | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Bushels | Value | Price per bushel | Bushels | Value | Price per bushel | Bushels | Value | Price per bushel | Bushels | Value | Price per bushel | Bushels | Value | Price per bushel |
| A | 2,917 | $10,334 | $3.54 | 9,920 | $22,549 | $2.35 | 9,825 | $22,064 | $2.25 | 3,223 | $7,293 | $2 28 | 25,885 | $62,240 | $2.40 |
| B | 2,771 | 10,106 | 3.65 | 10,307 | 24,202 | 2.35 | 7,641 | 16,079 | 2.15 | 1,403 | 2,898 | 2.07 | 22,122 | 53,285 | 2.41 |
| C | 1,195 | 4,186 | 3.50 | 4,760 | 11,034 | 2.45 | 3,143 | 6,154 | 1.96 | 320 | 814 | 2.54 | 9,418 | 22,188 | 2.36 |
| D | 72 | 275 | 3.82 | 3,432 | 7,022 | 2.05 | 4,407 | 9,786 | 2.22 | 1,212 | 2,517 | 2.08 | 9,123 | 19,600 | 2.15 |
| E | 358 | 1,283 | 3.58 | 1,934 | 4,266 | 2.21 | 2,617 | 5,260 | 2.01 | 564 | 1,298 | 2.30 | 5,473 | 12,107 | 2.21 |
| F | 30 | 114 | 3.80 | 1,191 | 2,437 | 2.05 | 1,889 | 4,508 | 2.39 | 164 | 376 | 2.29 | 3,274 | 7,435 | 2.27 |
| Total for the six companies | 7,343 | $26,298 | $3.58 | 31,544 | $71,510 | $2.27 | 29,522 | $63,851 | $2.16 | 6,886 | $15,196 | $2.21 | 75,295 | $176,855 | $2.35 |
| Per cent shipped each month | 9.7 | ..... | ..... | 41.9 | ..... | ..... | 39.2 | ..... | ..... | 9.2 | ..... | ..... | 100 | ..... | ..... |
| Total for other companies | 232 | $733 | $3.16 | 3,035 | $6,245 | $2.06 | 3,069 | $6,380 | $2.08 | 465 | $1,021 | $2.20 | 6,801 | $14,379 | $2.11 |
| Per cent shipped each month | 3.4 | ..... | ..... | 44.6 | ..... | ..... | 45.2 | ..... | ..... | 6.8 | ..... | ..... | 100 | ..... | ..... |
| Total shipments | 7,575 | $27,931 | $3.57 | 34,579 | $77,755 | $2.25 | 32,591 | $70,231 | $2.15 | 7,351 | $16,217 | $2.21 | 82,096 | $191,234 | $2.33 |
| Per cent shipped each month | 9.2 | ..... | ..... | 42.1 | ..... | ..... | 39.7 | ..... | ..... | 9.0 | ..... | ..... | 100 | ..... | ..... |

*Grading*

In general, peas are not sold on the market by grades as are apples or potatoes. Most growers try to have their pickers fill the baskets "good and full," and keep out vines, slabs, and white pods, but they have not yet attempted grading except in a few cases.

A few growers have established a reputation for good quality of their product in the market by paying especial attention to this feature of the marketing. One large grower in Madison County pays a special bonus of 5 cents per bushel to his field boss for each shipment that sells for the highest price on the market on that particular day. This bonus amounted to $62.85 for the 1925 season, being a premium on 56 per cent of all the peas sold. Just how much more the grower received by following this semi-grading method cannot be determined, but he seems to be convinced that the extra wages paid to the field boss for his efforts in seeing that only high-grade peas left the field, was money well spent.

Other experiences by growers whose baskets have been filled with care and whose peas have sold for higher prices, have led many to advocate grading on a large scale. Some commission merchants have advised grading, especially when the supplies are large and the prices relatively low. They argue that there is a certain class of trade which will always pay a good price for high-quality peas. Their belief is that graded peas will sell for from 50 cents to $1 more per bushel than ungraded peas of the same shipment.

In an extensive way the Erie County growers have probably come the nearest of any, in the areas studied, to selling by grade. The cooperative association at Orchard Park has for several years pooled its sales by grades. It employs an inspector who examines each grower's peas as they are brought to the association for shipment. The inspector merely samples a few baskets and designates them as Choice, Fancy, or Extra Fancy. The last-named group is further divided into Extra Fancy A No. 1, Extra Fancy No. 1, Extra Fancy No. 2, and Extra Fancy No. 3. On the market the peas are sold in only three grades, Choice, Fancy, and Extra Fancy. The receipts from these three grades are kept separate and the returns are pooled separately. The Extra Fancy grades, however, are all pooled as one grade, with a flat differential of 10 cents per bushel between the various subgrades. Extra Fancy A No. 1 is the highest subgrade; Extra Fancy No. 1 is next, with a pool price always 10 cents lower than that of Extra Fancy A No. 1. Similarly, Extra Fancy No. 2 and Extra Fancy No. 3 each have a pool price to the grocers of 10 cents per bushel lower than that of the preceding subgrade. For the market, however, Extra Fancy is the top grade, Fancy next, and Choice the lowest. In the past, most of the peas shipped by the association have been graded Fancy and Extra Fancy, with only an occasional lot of Choice peas. In table 56 are given the shipments by the association by grades for the 1925 season, and also some shipments by nine selected growers who shipped all their peas thru the association, and twelve selected growers who sold some of their peas in Buffalo.

After the record year of 1924, of heavy shipments and relatively low prices, the Madison County Pea Growers Cooperative Association, of Poolville, decided to put in some grading machinery and test this grad-

TABLE 56. ERIE COUNTY MARKET-PEA SHIPMENTS BY GRADES, 1925

| Grade | 9 selected farms, all peas shipped thru association | | 12 selected farms, some of the peas sold in Buffalo | | All peas shipped thru association | |
|---|---|---|---|---|---|---|
| | Number of bushels | Price per bushel | Number of bushels | Price per bushel | Number of bushels | Price per bushel |
| Extra Fancy: A No. 1 / No. 1 | 1,743 | $1.814 | 2,393 | $1.635 | 66,517 | $1.769 |
| No. 2 | 96 | 1.177 | 800 | 1.705 | 5,625 | 1.667 |
| No. 3 | ..... | ..... | ..... | ..... | 346 | 1.765 |
| Fancy | 117 | 1.023 | 267 | 1.071 | 1,739 | 0.962 |
| Choice | ..... | ..... | 2 | 0.530 | 75 | 0.484 |
| Sold in Buffalo | ..... | ..... | 5,096 | 1.923 | ..... | ..... |
| Total or average | 1,956 | $1.735 | 8,558 | $1.795 | 74,302 | $1.741 |

ing idea. Accordingly it invested approximately $600 in equipment, rented a small building for $240, and graded a few shipments as a test. About twenty lots were used as test cases. The results from ten of these tests are given in table 57. In each case the grower shipped part of his load as ungraded and part was put thru the grader; all were shipped in the same car and sold by the same commission firm, on the same market day. The prices were kept separate and the costs of grading were charged to the graded peas in addition to the other costs of marketing. This extra charge was calculated by the association manager at about 12 cents per bushel of graded peas sold. A credit of 25.5 cents per basket of graded peas was added to the net sales of the graded peas because the grower was saved from the necessity of buying that number of baskets and of paying an association charge on the number graded and not shipped. The saving in freight, cartage, and commission on the peas graded was calculated by using the net sale price rather than the gross price. In every case the net returns from the graded peas were more than those from the ungraded, averaging 32 cents per bushel for the ten tests reported in table 57. One grower received 55 cents per bushel more for his graded peas than for his ungraded product. The smallest difference for the ten cases was 13 cents in favor of the graded lots.

The grading process is very simple and is much like grading apples. The peas are unloaded by the grower on a small car at one end of the warehouse and the car is then pushed along the track to the grader, or the peas are stacked along the side of the warehouse until needed.

The peas are dumped from each basket into a hopper which permits them to fall thru on a wide belt that passes under it. As the peas pass along on this belt, a pea grader — a girl or a woman — stands on each side and picks out the slabs, white pods, vines, blighted pods, and other material to be rejected. At the end of the belt the peas fall into another basket, and when this is "good and full" the top is fastened on and the basket is labeled and set on another belt which carries it into the refrigerator car ready for shipment.

TABLE 57. RESULTS OF SOME TESTS IN MACHINE GRADING OF MARKET PEAS BY THE MADISON COUNTY PEA GROWERS COOPERATIVE ASSOCIATION, 1925

| | Ungraded peas | | | Graded peas | | | | | | | | Net gain | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Bushels delivered | Price per bushel | Total amount received | Bushels put in grader | Bushels graded | Bushels delivered | Price per bushel | Total amount received | Value of baskets, etc., saved | Cost of grading | Net amount received | Total net gain from grading | Gain per bushel from grading |
| No. 1 | 85 | $0.60 | $ 51.00 | 85 | 17 | 68 | $1.50 | $102.00 | $4.34 | $ 8.16 | $ 98.18 | $47.18 | $0.55 |
| No. 2 | 22 | 0.83 | 18.26 | 22 | 3 | 19 | 1.50 | 28.50 | 0.77 | 2.28 | 26.99 | 8.73 | 0.40 |
| No 3 | 39 | 0.83 | 32.37 | 39 | 4 | 35 | 1.50 | 52.50 | 1.02 | 4.20 | 49.32 | 16.95 | 0.43 |
| No. 4 | 55 | 1.07 | 58.97 | 55 | 3 | 52 | 1.52 | 79.00 | 0.77 | 6.25 | 73.52 | 14.55 | 0.26 |
| No. 5 | 30 | 0.97 | 29.15 | 30 | 6 | 24 | 1.52 | 36.50 | 1.53 | 2.88 | 35.15 | 6.00 | 0.20 |
| No. 6 | 105 | 1.26 | 132.63 | 105 | 15 | 90 | 2.16 | 194.50 | 3.83 | 10.80 | 187.53 | 54.90 | 0.52 |
| No. 7 | 52 | 1.04 | 53.85 | 52 | 5 | 47 | 1.38 | 64.80 | 1.28 | 5.65 | 60.43 | 6.58 | 0.13 |
| No. 8 | 39 | 1.22 | 47.58 | 39 | 5 | 34 | 1.80 | 61.25 | 1.28 | 4.08 | 58.45 | 10.87 | 0.28 |
| No. 9 | 13 | 1.22 | 15.81 | 13 | 2 | 11 | 1.80 | 19.80 | 0.52 | 1.32 | 19.00 | 3.19 | 0.25 |
| No. 10 | 127 | 1.12 | 142.53 | 127 | 29 | 98 | 1.80 | 176.30 | 7.38 | 11.75 | 171.93 | 29.40 | 0.23 |
| Average for 10 | 57 | $1.02 | $58.22 | 57 | 9 | 48 | $1.65 | $81.52 | $2.27 | $5.74 | $78.05 | $19.85 | $0.32 |

METHODS OF MARKETING AT A LARGE TERMINAL MARKET IN NEW YORK

The marketing of green peas at the terminal market involves many problems which are important to growers. Conditions in a New York City market are reported here as representative of the problems found in other terminal markets.

*Method of receiving peas*

Most of the peas from the Erie and Madison areas arrive in Hoboken or Weehawken, New Jersey, at the railroad terminals. There they are unloaded on automobile trucks and one-horse wagons to be taken across the Hudson River to the Washington Street market, a distance of 3.5 miles.

On the evening of July 19, 1925, some observations were made on this phase of the city marketing, as follows: Three one-horse wagons and eight men left Washington Street about seven o'clock, ferried across the river to Hoboken, and proceeded to unload two cars of peas from the Madison area. The state market inspector was there to report the condition of the peas and check the number of hampers contained in the car. Car no. 1 contained 549 bushel baskets of peas. These were loaded on the three wagons. The first wagon took 180 baskets, the second 184, and the third 185. Twenty minutes was required to load each wagon, and forty minutes to get the peas from Hoboken to Washington Street, Manhattan. Then thirty minutes passed before either wagon could get around to where it could be unloaded, and twenty minutes more was required to unload each wagon. All together, it required two hours per wagon from the time the wagons left Manhattan until the peas were unloaded at the commission firm's place of business. The time will vary, of course, with circumstances. On that particular evening the traffic was lighter than usual, because of its being Sunday. Hence there was little time lost thru delays. In rush periods the wagons and trucks are held up for hours waiting for an opportunity to be loaded or unloaded, as the case may be.

The problem of getting the produce from the railroad terminals to the wholesale market to be sold, and away from the market after it is sold, is one of the perplexing problems facing the fruit and vegetable trade.

*The Washington Street wholesale market*

On the lower west side of Manhattan Island, running north and south parallel with, and one block east of, West Street, is located the Washington Street fruit and vegetable market. It consists solely of a section of Washington Street about six blocks long, where the fruit and vegetable wholesale businesses are located.

On Sunday, when there is no marketing in process, Washington Street looks like any other street in lower Manhattan. But on a market night, from four o'clock in the afternoon until ten o'clock the next morning, the street is usually crowded with wagons and trucks, loaded with fruits and vegetables, each trying to get to or from a particular place of business. Mounted policemen are on duty continuously, endeavoring to

keep the traffic moving. On the sidewalks are piled stacks of fruit and vegetables, with only a narrow trench thru the middle where prospective buyers crowd in an effort to see what is on the market before making their purchases.

All green peas received in New York City must pass thru this "market funnel." It is the mechanism by which the ownership of the grower is transferred to the buyer, and the distribution in small quantities to numerous consumers is made possible. Green peas, like other highly perishable fruits and vegetables, are of such a nature that inspection by prospective buyers is practically always necessary. To accomplish this inspection at the time of sale, with such bulky products, has resulted in the evolution and present status of the Washington Street market in lower Manhattan.

*The bargaining process*

Every night during the producing season, except Saturdays and the nights just before a holiday, green peas are bought and sold on the Washington Street market. Until ten o'clock each evening the porters and salesmen of the many wholesale houses are busy getting the produce ready for the buyers to examine and bargain for.

At about ten or eleven o'clock at night, jobbers and retailers appear on the market and begin to ascertain the extent and the quality of the supply, and to inquire of the various salesmen their asking price. Each buyer will examine several baskets of peas. He will lift a basket to see how heavy it is; shake it to see whether the sample is uniform; and often break open a few pods to test the maturity and the sweetness of the peas. Occasionally a buyer is familiar with a certain grower's stamp, and does no more than observe the outward appearance of the peas and ask the price; and, unless the price is too far out of line with other marks, a sale is effected immediately.

Usually, however, buyers walk around from place to place for an hour or more, studying the situation. They first find out where the various grades of peas are - - best, medium, and poorest — and where the greatest supply is. They also get the asking prices of several salesmen. If the supply of peas on the market seems plentiful, buyers postpone their purchase for a while thinking the salesmen will have to lower their quotations before the peas can be sold. If most buyers think the same way and the peas are not selling very readily, the salesmen begin to realize that the peas cannot be sold at the prices asked. Consequently, the more alert salesmen begin to cut their quotations down to where sales can be made. As soon as the buyer thinks the price is low enough to result in sales, he quickly moves around to the place where he saw the peas that he wanted, and bargains for them at the best price possible — if the peas have not already been sold while he was waiting for quotations to work lower.

If the prospective buyers judge the supply to be relatively small in view of the prices asked, they immediately begin to make their purchases before the price rises or before the supply of good stock is all gone.

The better salesmen also are very quick to sense the relation of the supply to the demand. If their peas are selling faster than normal, they

FIGURE 18. WASHINGTON STREET WHOLESALE MARKET, NEW YORK CITY

jump the price up immediately to a point where the peas will just continue to sell at a satisfactory rate — a rate that will barely get the peas all sold by morning.

Some buyers are especially skilled in this ability to judge the market and get good produce at bargain prices, while many others are unable to sense the situation, and so frequently miss getting the peas they want or else pay higher than the average price for them. Likewise, salesmen

who can follow the market closely, and know just when to put the price higher and when to lower it, are in great demand. The few that are able to do this with a fair degree of success are paid well for their services. Their salaries range from $50 to $200 per week, depending on their ability to judge the market situation and act on it quickly enough.

It is evident that the bargaining process is the most vital part of the marketing chain. The price at which peas are sold affects the life and the plans of all parties. The salesman who can dispose of all his stock at a higher price than the average gets better wages. The wholesale house that is fortunate in having a superior salesman gets high prices for its shippers. The shippers are pleased and tell their neighbors, which results in more business for the wholesaler.

Looking at the other side, buyers who are skillful in securing high-quality produce at lower prices than average, from the less capable salesmen, gain advantages that are passed along the line from jobber, to retailer, to consumer. It may mean both increased business and increased profits to those affected.

Consequently, this is a type of price variation that makes possible such profits and such losses as are found in every kind of business.

### *Distribution of sales*

The market night of July 20, 1925, was selected as typical for a cross-section picture of the green-pea sales. That night 14 cars, or approximately 7000 baskets, of peas were sold in the market. The average quotation per bushel for the day was $1.69.[7]

The distribution of the sales of one large wholesale house in New York City for that night is given in table 58. This company sold 623 baskets, or about one-eleventh of the total sales on the market. They received $1243.75, or an average of about $2 per bushel.

The number of sales made was 39. The average number of bushels per sale was 16. Jobbers received 58.9 per cent of the peas, other wholesalers 25.4 per cent, retailers and peddlers 13.8 per cent, and chain stores 1.9 per cent. The buyers were from every section of the metropolitan area. Buyers from across the river in New Jersey took 21.5 per cent of the peas, buyers from Brooklyn took 27.6 per cent, and the remaining 50.9 per cent were distributed over Manhattan, Harlem, and the Bronx.

### *Cost of selling and handling green peas in the wholesale market*

Since green peas are handled by wholesalers who deal in many kinds of fruits and vegetables during the year, it is difficult to separate the cost of selling and handling peas from the total costs of doing business. Reliable data collected from one large wholesaler in New York, a firm which was one of the five largest receivers of green peas, show that, for the years 1923 and 1924, the amount paid to shippers for their produce took 68 per cent of the gross sales, freight costs, claims, and allowances took 22 per cent, and the total cost of distribution took 10 per cent. This shows that, of the amount which the jobber paid to the wholesaler,

[7] *Producers' Price Current* quotations, Urner-Barry Company, New York City.

TABLE 58. Distribution of Green-Pea Sales of a Washington Street, New York City, Wholesale House, on the Night of July 20, 1925

| | |
|---|---|
| Number of baskets of peas sold | 623 |
| Total amount received for peas | $1,243.75 |
| Average price per bushel | $2.00 |
| Range in price per bushel | $1.10 to $2.50 |
| Number of sales made | 39 |
| Average number of baskets per sale | 16 |
| Range in number of baskets per sale | 2 to 40 |
| Commonest number of baskets per sale | 15 |
| Number of baskets sold to jobbers | 367 |
| Number of baskets sold to wholesalers | 158 |
| Number of baskets sold to retailers and peddlers | 86 |
| Number of baskets sold to chain stores | 12 |
| Per cent of peas sold to jobbers | 58.9 |
| Per cent of peas sold to wholesalers | 25.4 |
| Per cent of peas sold to retailers and peddlers | 13.8 |
| Per cent of peas sold to chain stores | 1.9 |
| Per cent of peas going to New Jersey buyers | 21.5 |
| Per cent of peas going to Brooklyn buyers | 27.6 |
| Per cent of peas going to Harlem buyers | 13.5 |
| Per cent of peas going to Bronx buyers | 5.6 |
| Per cent of peas going to Manhattan and other buyers | 31.8 |

the cost of distribution after the fruit and vegetables reached the city was only 10 per cent. Of this cost of distribution, 42 per cent was direct wages for officers, clerks, and laborers, and 41 per cent was for cartage, sorting, packing, storage, and other items, chiefly labor.

A summary of the market-pea sales of another large commission firm in New York City, for the year 1925, is given in table 59. The place from which the peas were shipped, the number of shipments from each place, the total number of bushels, the net value, the average price per bushel, the net price per bushel, and the cost of shipping, carting, and selling the peas, are given for each shipping point. The gross price is what the peas sold for on the market, and the net price is what the growers received for them. The difference between these two prices represents the deductions for freight or express, cartage, and selling commission. This difference also shows approximately the minimum price at which the peas must sell to just pay the cost of marketing after they leave the farm. If the peas sell for no more than this difference, the farmer not only gets nothing for his work but has to pay for the picking and other cash costs from other income.

TABLE 59. MARKET-PEA SALES OF A NEW YORK CITY COMMISSION FIRM, 1925

| Point of origin | Number of shipments | Total number of bushels | Gross sales | Total net value | Average gross price | Average net price | Cost of shipping and selling |
|---|---|---|---|---|---|---|---|
| Morrisville, New York | 80 | 15,115 | $36,177.50 | $27,117.36 | $2.39 | $1.79 | $0.60 |
| Erieville, New York | 75 | 9,276 | 22,334.95 | 16,381.94 | 2.41 | 1.77 | 0.64 |
| Hamilton, New York | 63 | 14,219 | 31,373.80 | 24,139.91 | 2.21 | 1.70 | 0.51 |
| Lebanon, New York | 63 | 2,877 | 5,560.10 | 3,908.55 | 1.93 | 1.36 | 0.57 |
| Eaton, New York | 57 | 1,441 | 3,357.90 | 2,331.19 | 2.33 | 1.62 | 0.71 |
| Georgetown, New York | 54 | 1,601 | 4,022.25 | 3,027.30 | 2.51 | 1.89 | 0.62 |
| Edmeston, New York | 49 | 3,500 | 6,099.60 | 4,527.77 | 1.74 | 1.29 | 0.45 |
| Bouckville, New York | 31 | 2,437 | 5,751.89 | 4,281.85 | 2.36 | 1.76 | 0.60 |
| Munnsville, New York | 29 | 2,033 | 5,232.00 | 3,923.26 | 2.57 | 1.93 | 0.64 |
| Randallsville, New York | 28 | 3,171 | 7,906.00 | 6,348.67 | 2.49 | 2.00 | 0.49 |
| Deansboro, New York | 27 | 3,024 | 7,798.00 | 6,381.91 | 2.58 | 2.11 | 0.47 |
| Burlington Flats, New York | 21 | 745 | 1,175.66 | 835.03 | 1.58 | 1.12 | 0.46 |
| Earlville, New York | 15 | 404 | 854.06 | 616.92 | 2.11 | 1.53 | 0.58 |
| Solsville, New York | 14 | 970 | 2,086.75 | 1,559.59 | 2.15 | 1.61 | 0.54 |
| West Burlington, New York | 14 | 282 | 398.00 | 271.32 | 1.41 | 0.96 | 0.45 |
| Hartwick, New York | 13 | 135 | 203.25 | 147.54 | 1.51 | 1.09 | 0.42 |
| Burlington, New York | 12 | 263.5 | 349.00 | 233.98 | 1.32 | 0.89 | 0.43 |
| Madison, New York | 12 | 436 | 845.25 | 615.25 | 1.94 | 1.41 | 0.53 |
| Salters Depot, South Carolina | 12 | 169 | 436.25 | 271.10 | 2.58 | 1.60 | 0.98 |
| Cazenovia, New York | 11 | 271 | 521.25 | 366.21 | 1.92 | 1.35 | 0.57 |
| Burlington, New Jersey | 10 | 2,638 | 4,332.95 | 3,354.89 | 1.64 | 1.27 | 0.37 |
| Pratts Hollow, New York | 10 | 340 | 794.25 | 590.37 | 2.34 | 1.74 | 0.60 |
| Center Hill, Florida | 8 | 526 | 1,197.25 | 612.80 | 2.28 | 1.17 | 1.11 |
| West Eaton, New York | 8 | 226 | 483.25 | 346.60 | 2.14 | 1.53 | 0.61 |
| Cades, South Carolina | 6 | 100 | 183.40 | 87.31 | 1.83 | 0.87 | 0.96 |
| Laurel, New York | 6 | 29 | 59.50 | 46.29 | 2.05 | 1.60 | 0.45 |
| Peconic, New York | 6 | 56 | 133.50 | 106.15 | 2.38 | 1.90 | 0.48 |
| Worcester, New York | 6 | 64 | 96.00 | 67.96 | 1.50 | 1.06 | 0.44 |
| Baltimore, Maryland | 5 | 3,189 | 7,129.75 | 6,206.23 | 2.24 | 1.95 | 0.29 |
| East Worcester, New York | 5 | 52 | 71.00 | 50.74 | 1.37 | 0.98 | 0.39 |
| Oneida, New York | 5 | 73 | 147.00 | 100.37 | 2.01 | 1.37 | 0.64 |
| Edgewater Park, New Jersey | 4 | 148 | 254.75 | 199.67 | 1.72 | 1.35 | 0.37 |
| Elizabeth City, North Carolina | 4 | 798 | 2,760.50 | 2,021.82 | 3.46 | 2.53 | 0.93 |
| New Berlin, New York | 4 | 24 | 47.50 | 34.66 | 1.98 | 1.44 | 0.54 |
| Peterboro, New York | 4 | 68 | 141.00 | 100.17 | 2.07 | 1.47 | 0.60 |
| Westford, New York | 4 | 13 | 14.00 | 8.90 | 1.08 | 0.68 | 0.40 |
| Canastota, New York | 3 | 98 | 132.00 | 82.37 | 1.35 | 0.84 | 0.51 |
| Delanco, New Jersey | 3 | 279 | 372.75 | 301.47 | 1.34 | 1.08 | 0.26 |
| Franklin Springs, New York | 3 | 130 | 320.75 | 241.13 | 2.47 | 1.85 | 0.62 |
| Lake City, South Carolina | 3 | 268 | 693.65 | 544.53 | 2.59 | 2.03 | 0.56 |
| Lane, South Carolina | 3 | 44 | 112.50 | 65.41 | 2.56 | 1.49 | 1.07 |
| Poolville, New York | 3 | 51 | 133.00 | 100.26 | 2.61 | 1.97 | 0.64 |
| Sheds, New York | 3 | 25 | 113.50 | 91.63 | 4.54 | 3.67 | 0.87 |
| Smyrna, New York | 3 | 29 | 38.50 | 22.73 | 1.33 | 0.78 | 0.55 |
| Williston, Florida | 3 | 40 | 186.00 | 126.47 | 4.05 | 3.16 | 1.49 |
| Beverly, New Jersey | 2 | 174 | 287.50 | 201.95 | 1.65 | 1.16 | 0.49 |
| Cherry Valley, New York | 2 | 26 | 48.00 | 35.20 | 1.85 | 1.35 | 0.50 |
| Coward, South Carolina | 2 | 12 | 18.00 | 7.09 | 1.50 | 0.59 | 0.91 |
| Garrattsville, New York | 2 | 132 | 277.00 | 208.37 | 2.10 | 1.58 | 0.52 |
| Harlem market, New York City | 2 | 29 | 96.50 | 86.85 | 3.33 | 2.99 | 0.34 |
| Nassawadox, Virginia | 2 | 18 | 56.75 | 42.48 | 3.15 | 2.36 | 0.79 |
| Oaksville, New York | 2 | 40 | 70.00 | 51.34 | 1.75 | 1.28 | 0.47 |
| South Valley, New York | 2 | 7 | 14.25 | 10.96 | 2.04 | 1.57 | 0.47 |
| Stockbridge, New York | 2 | 133 | 463.00 | 368.79 | 3.48 | 2.77 | 0.71 |
| Miscellaneous | 2 | 9 | 16.00 | 13.16 | 1.78 | 1.46 | 0.32 |
| Chuckatuck, Virginia | 1 | 40 | 140.00 | 116.34 | 3.50 | 2.91 | 0.59 |
| De Ruyter, New York | 1 | 15 | 26.25 | 18.75 | 1.75 | 1.25 | 0.50 |
| East Moriches, New York | 1 | 8 | 16.50 | 13.25 | 2.06 | 1.66 | 0.40 |
| Fly Creek, New York | 1 | 10 | 15.00 | 11.02 | 1.50 | 1.10 | 0.40 |
| Hubbardsville, New York | 1 | 10 | 17.50 | 12.65 | 1.75 | 1.26 | 0.49 |
| Maryland, New York | 1 | 6 | 12.00 | 8.86 | 2.00 | 1.48 | 0.52 |
| Mattituck, New York | 1 | 6 | 21.00 | 17.40 | 3.50 | 2.90 | 0.60 |
| Morrisville, South Carolina | 1 | 10 | 20.00 | 10.44 | 2.00 | 1.04 | 0.96 |
| Newark, New Jersey | 1 | 16 | 18.00 | 16.20 | 1.12 | 1.01 | 0.11 |
| New Church, Virginia | 1 | 5 | 11.25 | 7.78 | 2.25 | 1.56 | 0.69 |
| Holey, Virginia | 1 | 21 | 99.50 | 79.72 | 4.74 | 3.80 | 0.94 |
| Pennellville, New York | 1 | 33 | 33.00 | 16.17 | 1.00 | 0.49 | 0.51 |
| Richfield Springs, New York | 1 | 121 | 138.75 | 75.67 | 1.15 | 0.63 | 0.52 |
| Salter's Point, South Carolina | 1 | 18 | 54.50 | 72.44 | 3.03 | 4.02 | 0.99 |
| Sherburne, New York | 1 | 12 | 30.00 | 22.32 | 2.50 | 1.86 | 0.64 |
| Southold, New York | 1 | 4 | 8.00 | 6.20 | 2.00 | 1.55 | 0.45 |
| Stamford Center, New York | 1 | 7 | 7.00 | 7.00 | 1.00 | 1.00 | 0.00 |
| Williamson, Florida | 1 | 22 | 74.25 | 44.89 | 3.38 | 2.04 | 1.34 |
| Yonkers, New York | 1 | 44 | 128.25 | 110.00 | 2.91 | 2.50 | 0.41 |

*Consumption of green peas, fruits, and other vegetables*

The receipts of important fresh fruits and vegetables in New York City, in pounds per capita, by months for 1925, are given in table 60. These data were calculated from car-lot receipts of fruits and vegetables as reported by the Bureau of Agricultural Economics of the United States Department of Agriculture, by multiplying the average number of packages per car by the average weight per package. The number of pounds was then divided by 8,500,000, the population reported for the Port of New York district for 1925.

Data on weights and number of packages were obtained from various sources, and weighted according to the number of shipments from the various areas shipping in different types of containers.

The car-lot receipts in New York City reduced to pounds in this way gives the approximate consumption per capita of these commodities in the metropolitan area. With some of the fruits, such as oranges and grapefruit, there is some redistribution to other markets. There are also some fruits and vegetables trucked in that do not get reported in the car-lot receipts. Reliable estimates give 10 per cent as the maximum amount entering the market in this way, but this amount would help to compensate for the part redistributed.

Most of the fruits and vegetables are highly perishable and must be consumed soon after they have arrived at the terminal market. Perishables are usually shipped direct from the areas of production to the places where they are to be consumed. Shipping to a primary market for redistribution to secondary markets is not usually done, since this would only mean unnecessary delays and would probably result in many losses.

Potatoes and apples are not so perishable. Since these commodities can be stored, they are consumed more evenly thruout the year, while the receipts tend to pile up during the harvest seasons.

The most striking feature of these data is the fact that the fruit and vegetable season for New York City consumers lasts for twelve months each year. New York knows no season for most fruits and vegetables. Green peas can be bought on the Washington Street market every week in the year. Another characteristic of this world-supplied market is the great variety of fruits and vegetables offered to the people thruout the year. In 1925 there were 78 varieties of fruits and vegetables reported in the market summary issued by the New York City office of the federal Bureau of Agricultural Economics.

*Problems in terminal marketing*

In a city such as Greater New York, with a population of approximately 8,500,000, the task of providing adequate quantities and varieties of fresh fruits and vegetables is complex. Estimates by W. P. Hedden, of the Port of New York Authority, give the average length of haul of fruits and vegetables into New York City as 1500 miles.[8] Mr. Hedden points out also that consumers are scattered from 1 to 50 miles away from the centralized market, requiring a great network of marketing machinery to distribute the produce after it has arrived. Direct

[8] Hedden, W. P. Produce terminal requirements in the New York area. April, 1925.

TABLE 60. RECEIPTS OF IMPORTANT FRUITS AND VEGETABLES IN GREATER NEW YORK, IN POUNDS PER CAPITA, BY MONTHS, 1925*

| | January | February | March | April | May | June | July | August | September | October | November | December | Total pounds per capita |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Pounds per capita | | | | | | | | | | | | |
| Vegetables: | | | | | | | | | | | | | |
| Potatoes, white | 7.1 | 8.3 | 8.7 | 11.3 | 11.6 | 17.0 | 9.5 | 6.1 | 6.1 | 10.6 | 10.0 | 6.9 | 113.0 |
| Cantaloupes | .... | .... | .... | .... | 0.2 | 4.1 | 6.5 | 5.3 | 3.2 | 1.2 | 0.3 | 0.1 | 20.9 |
| Onions | 1.7 | 1.7 | 1.0 | 2.0 | 1.6 | 1.5 | 1.5 | 1.7 | 1.4 | 2.2 | 2.5 | 1.5 | 20.3 |
| Lettuce | 0.9 | 1.2 | 1.7 | 1.9 | 1.7 | 0.5 | 1.5 | 2.1 | 1.6 | 1.3 | 1.3 | 1.2 | 16.9 |
| Cabbages | 1.2 | 1.3 | 1.5 | 1.9 | 1.7 | 0.9 | 0.1 | 0.2 | 0.6 | 0.9 | 0.8 | 0.9 | 12.0 |
| Cucumbers | .... | .... | 0.2 | 0.9 | 1.7 | 3.3 | 2.8 | 1.5 | 0.7 | 0.1 | 0.1 | .... | 11.3 |
| Watermelons | .... | .... | .... | .... | 0.1 | 2.7 | 4.2 | 3.1 | 0.4 | .... | .... | .... | 10.5 |
| Tomatoes | 0.2 | 0.6 | 0.6 | 0.7 | 1.4 | 2.3 | 1.6 | 0.5 | 0.6 | 0.7 | 0.5 | 0.5 | 10.2 |
| Celery | 0.8 | 0.8 | 1.0 | 0.9 | 0.6 | 0.1 | 0.1 | 0.1 | 0.4 | 0.6 | 1.0 | 1.2 | 7.6 |
| Green peas | 0.1 | 0.1 | 0.3 | 0.5 | 0.8 | 0.5 | 0.8 | 0.5 | 0.1 | 0.1 | 0.1 | 0.2 | 4.1 |
| Spinach | 0.3 | 0.4 | 0.6 | 0.7 | 0.1 | .... | .... | .... | .... | .... | 0.3 | 0.4 | 2.8 |
| Fruits: | | | | | | | | | | | | | |
| Bananas, total | 3.4 | 4.1 | 7.1 | 6.0 | 7.1 | 10.3 | 11.2 | 9.0 | 8.5 | 7.3 | 6.4 | 5.6 | 86.0 |
| Consumed in New York† | 1.6 | 1.9 | 3.3 | 2.8 | 3.3 | 4.8 | 5.2 | 4.2 | 3.9 | 3.4 | 3.0 | 2.6 | 40.0 |
| Apples | 4.3 | 4.4 | 4.3 | 4.1 | 3.1 | 1.6 | 1.7 | 2.1 | 8.0 | 10.6 | 7.9 | 5.6 | 57.7 |
| Grapes | .... | .... | .... | 0.1 | 0.1 | .... | 0.4 | 2.1 | 9.7 | 23.8 | 11.5 | 0.8 | 48.5 |
| Oranges | 4.9 | 4.0 | 4.6 | 4.4 | 2.9 | 2.6 | 1.8 | 1.4 | 1.4 | 1.9 | 2.8 | 5.1 | 37.8 |
| Pears | 0.2 | 0.3 | 0.2 | 0.2 | .... | .... | 1.9 | 4.4 | 5.9 | 4.1 | 0.7 | 0.4 | 18.3 |
| Grapefruit | 1.6 | 1.7 | 2.2 | 2.1 | 1.5 | 0.7 | 0.1 | 0.2 | 1.5 | 2.6 | 1.7 | 1.6 | 17.5 |
| Peaches | .... | .... | .... | .... | 0.1 | 2.9 | 7.3 | 2.7 | 0.8 | 0.1 | .... | .... | 13.9 |
| Total, 78 fruits and vegetables‡ | 27.2 | 29.5 | 35.3 | 42.5 | 43.1 | 55.5 | 52.2 | 42.1 | 47.9 | 61.2 | 43.8 | 31.6 | 512.0 |

* Calculated from car-lot receipts reported by the Bureau of Agricultural Economics, United States Department of Agriculture.
† Fruitaco standard, March, 1926, page 17.
‡ For bananas, only those consumed in New York are included.

trading by producer and consumer is practically impossible under such conditions.

The marketing of such vegetables as green peas, lettuce, and tomatoes requires a more centralized market and involves more transactions per pound than does that of less perishable vegetables such as potatoes and cabbages. Moreover, peas and lettuce are purchased in smaller quantities by consumers. The city housewife wants a variety of these vegetables, but not much at a time of any one of them. This results in a small-unit, wide-variety trading of retailers and jobbers. The retailer aims to carry enough stock to satisfy all of the varied tastes of his customers, but is not willing to stock up with perishables which may spoil before they can be sold. Consequently, he usually buys but one package of each variety at a time. The jobber who supplies the retailers cannot furnish the desired variety in such small quantities, unless he goes to a central market where he can buy 10 or 20 baskets or crates of each variety without having to take a whole carload. With a car of green peas, containing 500 baskets, received by a wholesaler, this would mean that a jobber would ordinarily buy about 1/33 of a car, a retailer 1/500 of a car, and a housewife (assuming 3 pounds to a purchase) 1/5000 of a car. Or, in other words, a farmer growing 4 acres of peas produces one carload, which goes to a primary market where it is distributed, thru wholesalers, jobbers, and retailers, to approximately 5000 families comprising 25,000 consumers.

With a varying supply of these commodities, and an ever-changing consumer demand for them, new problems arise daily in meeting the different situations. The customs and habits of a cosmopolitan population such as that of New York not only are widely different but are constantly changing. The advent of the automobile, for example, has changed the ways of many people. Instead of the housewife buying a supply of vegetables to last over a holiday, as in times past, people who have cars now put up a light lunch and go out into the country for a ride and a rest. The same situation is common on Sundays, also. As a result, the Saturday market and the market days preceding holidays are very quiet as compared with other days.

Varying weather conditions also might affect the demand. In a period of unusually hot weather, people usually buy less of the foods that have to be cooked, and use relatively more fresh fruits, such as melons. If such a hot spell happens to come during the peak of shipments of a perishable commodity such as peas, prices go lower than usual and growers and dealers wonder what is the matter.

Another factor that affects the demand for vegetables to a considerable extent is the educational work always going on. Teachers, doctors, and magazine writers are constantly discussing the merits of different fruits and vegetables. Consumers are advised today to eat more oranges and tomorrow to eat more lettuce. These influences all have their effect on the market. The problem of deciding for months in advance what and how much to produce or to stock a store with, for such an ever-changing consumer demand, creates opportunities for both profits and losses in every phase of the business.

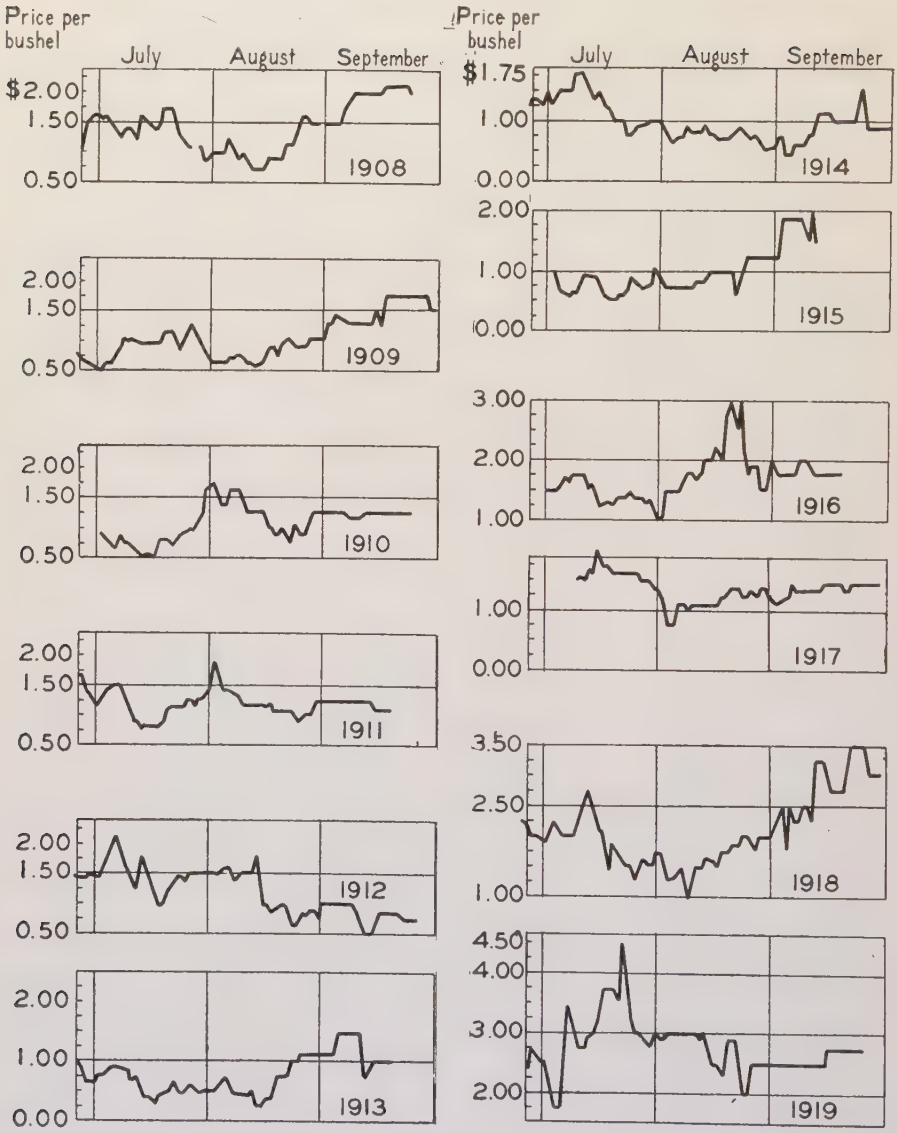
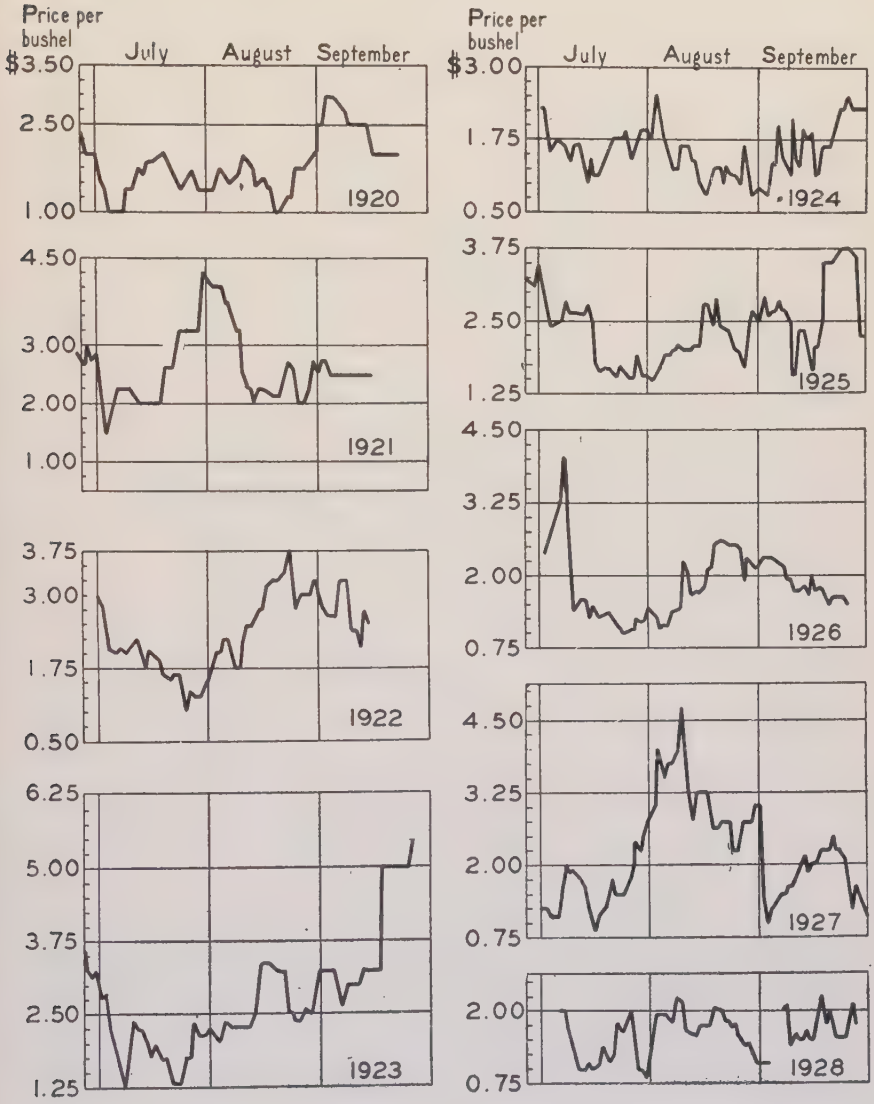



FIGURE 19. AVERAGE WHOLESALE PRICES OF NEW
(Prices from *Producers' Price Current;* averages




YORK STATE PEAS PER BUSHEL BASKET, 1908 TO 1925

of best, ordinary, and poor-to-fair quotations)

WHOLESALE PRICES OF STATE GREEN PEAS IN NEW YORK CITY

The wholesale prices of state peas in New York City for each market day, for the years 1908 to 1925, inclusive, are shown in table 61 and in figure 19. The five-year average for 1910 to 1914, and the five-year average for 1921 to 1925, are shown in figure 20.

In the early five-year average there were three distinct periods of high and low prices. Prior to July 4, when the demand was strong and the supplies were light, just as the earliest peas were coming on the market the prices were usually high. About the middle of July the shipments of early varieties reached their peak, and the prices worked down to less than $1 per bushel for about one week. By August 1 the early varieties were practically all shipped, while the late varieties were arriving.

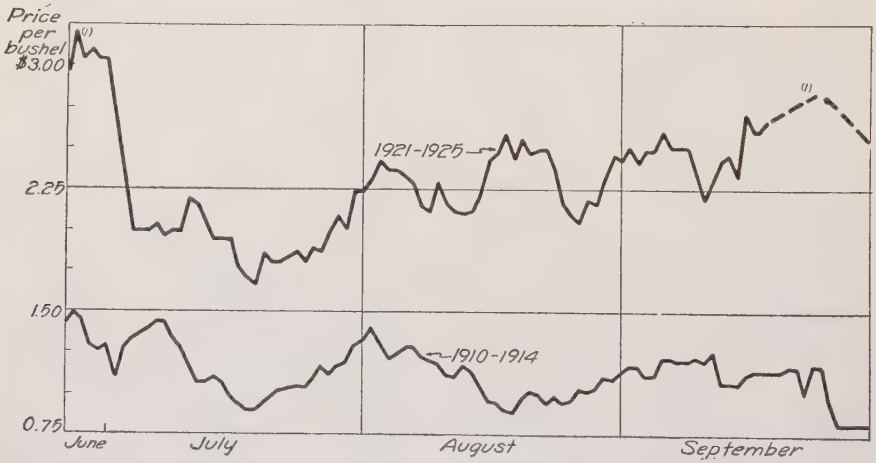



FIGURE 20. COMPARISON OF FIVE-YEAR AVERAGES, 1910–1914 AND 1921–1925, OF WHOLESALE PRICES PER BUSHEL BASKET OF STATE PEAS IN NEW YORK CITY

(Prices from *Producers' Price Current;* averages of best, ordinary, and poor-to-fair quotations. (1) Prices incomplete, for all five years, before July 1 and after September 5

With moderate supplies and the better quality, late-variety prices had worked up again for a second period of high prices. Then toward the latter part of August, as the late varieties reached their peak of maturity, prices were forced down again for the second low period. Finally, as the pea harvesting in New York State gradually came to a close, the prices worked back to about the average for the season. The demand for green peas by this time, however, had practically disappeared, so that sales and prices were irregular and uncertain.

TABLE 61. AVERAGE WHOLESALE PRICES IN NEW YORK CITY FOR STATE PEAS, PER BASKET (BUSHEL)*

(H = holiday, S = Sunday)

| | Five-year average, 1910–1914 | 1908 | 1909 | 1910 | 1911 | 1912 | 1913 | 1914 | 1915 | 1916 | 1917 | 1918 | 1919 | 1920 | 1921 | 1922 | 1923 | 1924 | 1925 | 1926 | 1927 | 1928 | Five-year average, 1921–1925 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| June 25 | $1.44 | $1.06 | $0.82 | + | S | $1.44 | + | $1.12 | + | S | + | $2.62 | + | $2.38 | $2.88 | S | + | + | $3.00 | + | + | + | $2.94 |
| 26 | 1.49 | 1.22 | 0.68 | S | $1.69 | 1.40 | $1.50 | 1.38 | + | + | + | 2.62 | $2.38 | 2.00 | S | + | $3.62 | + | 3.25 | + | + | + | 3.21 |
| 27 | 1.46 | 1.46 | S | + | 1.69 | 1.40 | 1.38 | 1.38 | S | + | + | 2.00 | 2.75 | S | 2.62 | + | 3.25 | + | 3.25 | S | + | + | 3.04 |
| 28 | 1.30 | S | 0.58 | + | 1.38 | 1.40 | 1.12 | S | + | + | + | 2.00 | 2.75 | 2.00 | 3.00 | + | 3.12 | + | S | + | $2.75 | + | 3.10 |
| 29 | 1.28 | 1.63 | 0.52 | + | 1.31 | 1.46 | S | 1.25 | + | + | + | 2.00 | S | 2.00 | 2.75 | + | 3.25 | S | 3.125 | + | 1.50 | + | 3.04 |
| 30 | 1.30 | 1.63 | 0.50 | + | 1.13 | S | 1.12 | 1.50 | + | $1.50 | + | S | 2.50 | 2.00 | 2.88 | $3.00 | 2.75 | + | 3.50 | + | 1.25 | + | 3.03 |
| Average for June 25–30 | $1.38 | $1.40 | $0.62 | ..... | $1.44 | $1.42 | $1.28 | $1.33 | ..... | $1.50 | ..... | $2.25 | $2.60 | $2.08 | $2.83 | $3.00 | $3.20 | ..... | $2.69 | ..... | $1.83 | .... | $3.06 |
| July 1 | $1.20 | $1.56 | $0.44 | $0.94 | $1.25 | $1.43 | $1.12 | $1.25 | $1.00 | $1.50 | S | $1.88 | $2.50 | $1.50 | $2.25 | $2.75 | S | $2.25 | $3.25 | $2.25 | $1.25 | + | $2.66 |
| 2 | 1.27 | 1.63 | 0.62 | 0.81 | S | 1.56 | 1.25 | 1.38 | 1.00 | S | + | 2.00 | 2.25 | 1.38 | 1.50 | S | $2.88 | 2.25 | 2.875 | 1.94 | 1.12 | + | 2.39 |
| 3 | 1.33 | 1.56 | 0.62 | S | 1.44 | 1.72 | 1.25 | 1.50 | 0.68 | 1.50 | + | 2.25 | 1.75 | 1.00 | S | 2.12 | 2.25 | 1.50 | 2.375 | 2.68 | S | + | 2.00 |
| 4 | H | H | S | H | H | H | H | H | S | H | H | H | H | S | H | H | H | H | H | S | H | H | H |
| 5 | 1.39 | S | H | 0.62 | 1.50 | 1.94 | 1.38 | S | H | 1.75 | + | 2.00 | 1.75 | H | 2.00 | 2.00 | 1.75 | 1.75 | S | H | 1.12 | $2.00 | 1.99 |
| 6 | 1.44 | 1.22 | 0.86 | 0.69 | 1.50 | 2.12 | S | 1.50 | 0.58 | 1.62 | + | 2.00 | S | 1.00 | 2.25 | 2.12 | 1.62 | S | 2.50 | 2.94 | 1.75 | 2.00 | 2.04 |
| 7 | 1.44 | 1.38 | 1.01 | 0.88 | 1.34 | S | 1.38 | 1.75 | 0.68 | 1.75 | + | S | 3.00 | 1.00 | 2.25 | 2.00 | 1.25 | 1.62 | 2.75 | 2.62 | 2.00 | 1.69 | 1.97 |
| 8 | 1.34 | 1.38 | 0.98 | 0.75 | 1.18 | 1.62 | 1.38 | 1.75 | 0.58 | 1.75 | S | 2.00 | 3.50 | 1.38 | 2.25 | 2.00 | S | 1.50 | 2.875 | 3.21 | 1.88 | S | 2.00 |
| 9 | 1.29 | 1.31 | 1.01 | 0.75 | S | 1.56 | 1.31 | 1.81 | 0.62 | S | $1.50 | 2.00 | 3.12 | 1.38 | 2.25 | S | 1.50 | 1.38 | 2.69 | 2.08 | 1.88 | 1.31 | 1.98 |
| 10 | 1.18 | 1.18 | 0.98 | S | 0.88 | 1.44 | 1.18 | 1.75 | 0.94 | 1.75 | 1.62 | 2.25 | 2.75 | 1.38 | S | 2.12 | 2.38 | 1.62 | 2.69 | 1.31 | S | 1.00 | 2.19 |
| 11 | 1.07 | 1.62 | S | 0.59 | 0.88 | 1.19 | 1.18 | 1.50 | S | 1.50 | 1.50 | 2.50 | 2.75 | S | 2.00 | 2.25 | 2.25 | 1.62 | 2.69 | S | 1.75 | 1.00 | 2.16 |
| 12 | 1.07 | S | 0.88 | 0.52 | 0.75 | 1.38 | 1.25 | S | 0.88 | 1.62 | 1.75 | 2.75 | 2.88 | 1.75 | 2.00 | 2.00 | 2.25 | 1.38 | S | 1.58 | 1.62 | 1.00 | 2.06 |
| 13 | 1.10 | 1.50 | 0.94 | 0.49 | 0.82 | 1.75 | S | 1.38 | 0.88 | 1.38 | 1.62 | 2.62 | S | 1.62 | 2.00 | 1.75 | 2.12 | S | 2.62 | 1.58 | 1.25 | 1.12 | 1.94 |
| 14 | 1.07 | 1.44 | 0.94 | 0.55 | 0.82 | S | 0.88 | 1.50 | 0.82 | 1.25 | 2.00 | S | 3.00 | 1.88 | 2.00 | 2.12 | 1.75 | 1.00 | 2.81 | 1.42 | 1.12 | 1.00 | 1.94 |
| 15 | 0.99 | 1.38 | 0.94 | 0.55 | 0.82 | 1.44 | 0.88 | 1.25 | 0.68 | 1.25 | S | 2.38 | 3.25 | 1.88 | 2.00 | 2.00 | S | 1.38 | 2.50 | 1.33 | 0.88 | S | 1.95 |
| 16 | 0.94 | 1.38 | 0.94 | 0.50 | S | 1.31 | 0.81 | 1.25 | 0.58 | S | 1.75 | 2.12 | 3.25 | 1.88 | 2.00 | S | 2.00 | 1.12 | 1.81 | 1.46 | 1.12 | 1.05 | 1.77 |
| 17 | 0.90 | 1.50 | 0.94 | S | 0.82 | 1.12 | 0.75 | 1.18 | 0.52 | 1.31 | 1.75 | 2.12 | 3.75 | 2.00 | S | 1.88 | 1.88 | 1.12 | 1.62 | 1.25 | S | 1.38 | 1.70 |
| 18 | 0.90 | 1.75 | S | 0.80 | 0.88 | 0.94 | 0.88 | 1.00 | S | 1.25 | 1.62 | 1.38 | 3.75 | S | 2.00 | 1.62 | 1.75 | 1.31 | 1.69 | S | 1.25 | + | 1.67 |
| 19 | 0.95 | S | 1.12 | 0.80 | 1.06 | 0.94 | 0.94 | S | 0.52 | 1.38 | 1.62 | 1.88 | 3.75 | 2.25 | 2.62 | 1.62 | 1.80 | 1.50 | S | 1.25 | 1.50 | 1.12 | 1.85 |
| 20 | 1.00 | 1.75 | 1.12 | 0.80 | 1.06 | 1.19 | S | 1.00 | 0.62 | 1.38 | + | 1.75 | S | 2.12 | 2.62 | 1.50 | 1.58 | S | 1.69 | 1.25 | 1.75 | 1.25 | 1.80 |
| 21 | 1.02 | 1.62 | 0.92 | 0.75 | 1.12 | S | 1.00 | 1.00 | 0.62 | 1.38 | + | S | 3.50 | 1.88 | 2.75 | 1.62 | 1.30 | 1.75 | 1.62 | 1.04 | 1.50 | 1.75 | 1.81 |
| 22 | 1.03 | 1.31 | 0.80 | 0.80 | 1.12 | 1.31 | 1.12 | 0.80 | 0.70 | 1.50 | S | 1.50 | 4.50 | 1.62 | 3.00 | 1.62 | S | 1.75 | 1.50 | 1.08 | 1.50 | S | 1.83 |
| 23 | 1.04 | 1.18 | 0.88 | 0.88 | S | 1.44 | 1.00 | 0.75 | 0.88 | S | + | 1.50 | 3.75 | 1.50 | 3.25 | S | 1.30 | + | 1.75 | 0.96 | 1.50 | 1.62 | 1.87 |
| 24 | 1.03 | 1.12 | 1.00 | S | 1.12 | 1.44 | 0.94 | 0.75 | 0.82 | 1.38 | 1.62 | 1.50 | 3.25 | 1.38 | S | 1.00 | 1.38 | 1.75 | 1.62 | 0.96 | S | 1.75 | 1.80 |
| 25 | 1.08 | 1.12 | S | 0.94 | 1.25 | 1.31 | 1.00 | 0.88 | S | 1.38 | 1.62 | 1.25 | 3.00 | S | 3.25 | 1.00 | 1.75 | 1.88 | 1.56 | S | 1.75 | 2.00 | 1.89 |
| 26 | 1.16 | S | 1.25 | 1.00 | 1.25 | 1.50 | 1.12 | S | 0.70 | 1.38 | 1.50 | 1.50 | 3.00 | 1.62 | 3.25 | 1.38 | 1.75 | 1.38 | S | 1.01 | 2.00 | 1.38 | 1.86 |
| 27 | 1.11 | 1.12 | 1.12 | 0.95 | 1.12 | 1.50 | S | 0.94 | 0.75 | 1.25 | 1.50 | 1.62 | S | 1.75 | 3.25 | 1.25 | 2.38 | S | 1.50 | 0.92 | 2.38 | 1.00 | 1.99 |
| 28 | 1.16 | 1.12 | 0.94 | 1.05 | 1.25 | S | 1.00 | 1.00 | 0.75 | 1.38 | 1.50 | S | 2.88 | 1.50 | 3.25 | 1.25 | 2.12 | 1.75 | 2.06 | 1.00 | 2.25 | 1.00 | 2.09 |
| 29 | 1.19 | 0.88 | 0.80 | 1.25 | 1.25 | 1.50 | 0.94 | 1.00 | 0.81 | 1.12 | S | 1.50 | 2.75 | 1.38 | 3.25 | 1.25 | S | 1.88 | 1.56 | 1.00 | 2.50 | S | 2.01 |
| 30 | 1.30 | 0.88 | 0.72 | 1.62 | S | 1.50 | 1.00 | 1.00 | 1.08 | S | 1.38 | 1.50 | 2.75 | 1.38 | 4.25 | S | 2.12 | 1.88 | 1.56 | 1.04 | 2.75 | 0.88 | 2.24 |
| 31 | 1.32 | 1.00 | 0.62 | S | 1.50 | 1.50 | 1.00 | 0.94 | 0.94 | 1.00 | 1.38 | 1.75 | 3.00 | 1.38 | S | 1.50 | 2.25 | 1.75 | 1.56 | 1.31 | S | + | 2.24 |
| Average for July | $1.10 | $1.34 | $0.90 | $0.81 | $1.12 | $1.45 | $1.07 | $1.22 | $0.76 | $1.43 | $1.60 | $1.90 | $3.05 | $1.57 | $2.54 | $1.75 | $1.89 | $1.60 | $2.21 | $1.56 | $1.65 | $1.35 | $1.99 |

*From *Producers' Price Current.* +, no quotations available.

TABLE 61 (*concluded*)

| | Five-year average, 1910–1914 | 1908 | 1909 | 1910 | 1911 | 1912 | 1913 | 1914 | 1915 | 1916 | 1917 | 1918 | 1919 | 1920 | 1921 | 1922 | 1923 | 1924 | 1925 | 1926 | 1927 | 1928 | Five-year average, 1921–1925 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| August 1 | $1.40 | $1.00 | S | $1.75 | $1.94 | $1.50 | $1.00 | $0.80 | S | $1.06 | $1.25 | $1.75 | $2.88 | S | $4.00 | $1.88 | $2.12 | $2.00 | $1.50 | S | $3.00 | + | $2.30 |
| 2 | 1.32 | S | $0.62 | 1.75 | 1.69 | 1.47 | 1.00 | S | $0.75 | 1.50 | 0.75 | 1.38 | 3.00 | $1.38 | 4.00 | 2.00 | 2.00 | 2.50 | S | $1.34 | 4.00 | $1.94 | 2.42 |
| 3 | 1.22 | 1.00 | 0.62 | 1.50 | 1.44 | 1.47 | S | 0.62 | 0.75 | 1.50 | 0.75 | 1.25 | S | 1.75 | 4.00 | 2.00 | 2.00 | S | 1.69 | 1.21 | 3.75 | 1.94 | 2.36 |
| 4 | 1.24 | 1.25 | 0.62 | 1.38 | 1.44 | S | 1.18 | 0.70 | 0.75 | 1.50 | 0.75 | S | 3.00 | 1.75 | 4.00 | 2.25 | 1.88 | 1.75 | 1.94 | 0.92 | 3.50 | 1.94 | 2.36 |
| 5 | 1.28 | 1.12 | 0.68 | 1.38 | 1.44 | 1.56 | 1.25 | 0.75 | 0.75 | 1.50 | S | 1.38 | 3.00 | 1.62 | 3.75 | 2.25 | S | 1.62 | 1.94 | 1.06 | 3.75 | S | 2.33 |
| 6 | 1.29 | 1.00 | 0.68 | 1.62 | S | 1.56 | 1.12 | 0.75 | 0.75 | S | 1.12 | 1.50 | 3.00 | 1.50 | 3.75 | S | 2.25 | 1.38 | 2.00 | 0.79 | 3.75 | 1.79 | 2.28 |
| 7 | 1.23 | 0.88 | 0.75 | S | 1.31 | 1.38 | 0.94 | 0.88 | 0.75 | 1.62 | 1.12 | 1.38 | 3.00 | 1.50 | S | 1.75 | 2.25 | 1.25 | 2.00 | 1.09 | S | 2.25 | 2.15 |
| 8 | 1.21 | 1.00 | S | 1.62 | 1.31 | 1.38 | 0.94 | 0.80 | S | 1.75 | 1.00 | 1.00 | 3.00 | S | 3.25 | 1.75 | 2.25 | 1.25 | 2.06 | S | 4.00 | 2.19 | 2.11 |
| 9 | 1.19 | S | 0.70 | 1.50 | 1.19 | 1.50 | 0.94 | S | 0.75 | 1.75 | 1.12 | 1.25 | 3.00 | 1.62 | 3.25 | 2.25 | 2.25 | 1.62 | S | 1.41 | 4.75 | 2.06 | 2.28 |
| 10 | 1.12 | 0.88 | 0.62 | 1.25 | 1.19 | 1.50 | S | 0.80 | 0.81 | 1.62 | 1.12 | 1.50 | S | 2.00 | 2.50 | 2.50 | + | S | 2.00 | 2.50 | 4.25 | 1.62 | 2.17 |
| 11 | 1.11 | 0.75 | 0.62 | 1.25 | 1.19 | S | 0.81 | 0.80 | 0.81 | 1.75 | 1.12 | S | 3.00 | 2.00 | 2.25 | 2.50 | 2.25 | 1.62 | 2.00 | 2.00 | 3.25 | 1.62 | 2.12 |
| 12 | 1.18 | 0.75 | 0.55 | 1.25 | 1.19 | 1.50 | 1.00 | 0.94 | 0.81 | 2.00 | S | 1.50 | 2.88 | 1.88 | 2.25 | 2.50 | S | 1.38 | 2.00 | 2.04 | 2.75 | S | 2.10 |
| 13 | 1.14 | 0.75 | 0.60 | 1.25 | S | 1.75 | 0.75 | 0.75 | 0.88 | S | 1.12 | 1.62 | 3.00 | 1.75 | 2.00 | S | 2.50 | 1.38 | 2.06 | 1.65 | 3.25 | 1.56 | 2.11 |
| 14 | 1.05 | 0.75 | 0.60 | S | 1.19 | 1.31 | 0.75 | 0.75 | 1.00 | 2.00 | 1.12 | 1.62 | 2.75 | 1.38 | S | 2.75 | 3.12 | 1.05 | 2.06 | 1.68 | S | 1.71 | 2.22 |
| 15 | 0.96 | 0.88 | S | 1.25 | 1.12 | 1.00 | 0.75 | 0.70 | S | 2.25 | 1.12 | 1.62 | 2.50 | S | 2.25 | 2.75 | 3.38 | 0.92 | 2.81 | S | 3.25 | 1.75 | 2.42 |
| 16 | 0.95 | S | 0.88 | 1.00 | 1.19 | 1.00 | 0.88 | S | 1.00 | 2.12 | 1.12 | 1.50 | 2.50 | 1.62 | 2.25 | 3.12 | 3.38 | 0.80 | S | 1.75 | 3.25 | 1.75 | 2.47 |
| 17 | 0.90 | 0.88 | 0.88 | 1.00 | 1.06 | 0.87 | S | 0.70 | 1.00 | 2.00 | 1.25 | 1.75 | S | 1.38 | 2.50 | 3.25 | 3.38 | S | 2.81 | 1.75 | 3.00 | 1.75 | 2.58 |
| 18 | 0.89 | 0.88 | 0.75 | 0.88 | 1.06 | S | 0.88 | 0.70 | 1.00 | 2.75 | 1.25 | S | 2.25 | 1.38 | 2.12 | 3.25 | 3.25 | 1.12 | 2.44 | 2.33 | 2.62 | 2.06 | 2.44 |
| 19 | 0.99 | 0.88 | 0.94 | 0.88 | 1.06 | 1.00 | 1.25 | 0.75 | 1.00 | 3.00 | S | 1.75 | 2.50 | 1.00 | 2.12 | 3.25 | S | 1.25 | 2.94 | 2.00 | 2.62 | S | 2 56 |
| 20 | 1.02 | 1.12 | 1.00 | 1.00 | S | 1.00 | 1.25 | 0.81 | 1.00 | S | 1.38 | 1.88 | 2.88 | 1.00 | 2.12 | S | 3.25 | 1.25 | 2.38 | 2.16 | 2.75 | 2.00 | 2.46 |
| 21 | 1.01 | 1.12 | 1.00 | S | 1.06 | 1.00 | 1.25 | 0.88 | 0.62 | 2.50 | 1.38 | 1.88 | 2.88 | 1.00 | S | 3.38 | 3.25 | 1.00 | 2.44 | 2.69 | S | 1.81 | 2.48 |
| 22 | 0.95 | 1.12 | S | 0.75 | 1.06 | 0.81 | 1.25 | 0.88 | S | 2.88 | 1.38 | 1.88 | 2.88 | S | 2.50 | 3.75 | 2.50 | 1.30 | 2.41 | S | 2.75 | 1.81 | 2.49 |
| 23 | 0.99 | S | 0.88 | 1.00 | 1.00 | 0.68 | 1.50 | S | 1.12 | 2.12 | 1.25 | 2.00 | 2.00 | 1.25 | 2.75 | 3.25 | 2.50 | 1.12 | S | 2.56 | 2.75 | 1.69 | 2.36 |
| 24 | 0.95 | 1.50 | 0.88 | 1.00 | 0.90 | 0.68 | S | 0.68 | 1.25 | 1.75 | 1.25 | 2.00 | S | 1.25 | 2.62 | 2.75 | 2.38 | S | 2.00 | 2.56 | 2.25 | 1.75 | 2.17 |
| 25 | 0.97 | 1.62 | 0.88 | 0.88 | 0.94 | S | 1.50 | 0.75 | 1.25 | 1.88 | 1.38 | S | 2.00 | 1.75 | 2.00 | 3.00 | 2.38 | 1.12 | 2.00 | 2.56 | 2.25 | 1.62 | 2.10 |
| 26 | 1.03 | 1.62 | 0.88 | 0.88 | 1.00 | 0.88 | 1.62 | 0.75 | 1.25 | 1.88 | S | 1.75 | 2.50 | 1.75 | 2.00 | 3.00 | S | 1.00 | 1.75 | 2.50 | 2.50 | S | 2.05 |
| 27 | 1.02 | 1.50 | 1.00 | 1.00 | S | 0.84 | 1.62 | 0.62 | 1.25 | S | 1.25 | 2.00 | 2.50 | 1.75 | 2.00 | S | 2.62 | 1.62 | 1.69 | 1.94 | 2.75 | 1.38 | 2.19 |
| 28 | 1.03 | 1.50 | 1.00 | S | 1.00 | 0.90 | 1.62 | 0.50 | 1.25 | 1.50 | 1.38 | 2.00 | 2.50 | 1.75 | S | 3.00 | 2.50 | 1.12 | 2.12 | 2.31 | S | 1.44 | 2.17 |
| 29 | 1.10 | 1.50 | S | 1.25 | 1.19 | 0.90 | 1.62 | 0.55 | S | 1.50 | 1.38 | 2.00 | 2.50 | S | 2.25 | 3.25 | 2.50 | 0.80 | 2.69 | S | 2.75 | 1.25 | 2.30 |
| 30 | 1.09 | S | 1.00 | 1.25 | 1.25 | 0.78 | 1.62 | S | 1.25 | 1.88 | 1.25 | 2.00 | 2.50 | 2.00 | 2.75 | 3.25 | 2.75 | 0.92 | 2.60 | 2.15 | 3.00 | 1.12 | 2.45 |
| 31 | 1.14 | 1.50 | 1.00 | 1.25 | 1.25 | 1.00 | S | 0.58 | 1.25 | 2.00 | 1.25 | 2.00 | S | 2.50 | 2.50 | 3.00 | 3.25 | S | 2.50 | 2.19 | 3.00 | 1.12 | 2.42 |
| Average for August | $1.10 | $1.11 | $0.79 | $1.21 | $1.21 | $1.16 | $1.16 | $0.74 | $0.96 | $1.91 | $1.17 | $1.67 | $2.71 | $1.60 | $2.73 | $2.73 | $2.62 | $1.31 | $2.20 | $1.63 | $3.17 | $1.73 | $2.30 |

| | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| September | 1 | $1.17 | $1.50 | $1.25 | $1.25 | $1.25 | S | H | $0.75 | $1.25 | $1.75 | $1.12 | S | H | $2.50 | $2.75 | $2.75 | $3.25 | H | $2.94 | $2.31 | $1.38 | $1.12 | $2.51 |
| | 2 | 1.17 | 1.50 | 1.25 | 1.25 | 1.25 | H | $1.62 | 0.75 | 1.88 | 1.75 | S | H | $2.50 | 3.00 | 2.75 | 2.62 | S | $0.80 | 2.56 | 2.31 | 1.00 | S | 2.40 |
| | 3 | 1.11 | 1.50 | 1.38 | 1.25 | S | $1.00 | 1.62 | 0.42 | 1.88 | S | H | $2.50 | 2.50 | 3.00 | 2.50 | S | H | 1.38 | 2.69 | 2.31 | 1.25 | + | 2.49 |
| | 4 | 1.11 | 1.50 | 1.38 | S | H | 1.00 | 1.62 | 0.42 | 1.88 | H | 1.25 | 1.75 | 2.50 | 3.00 | S | H | 3.25 | 1.32 | 2.69 | 2.31 | S | + | 2.48 |
| | 5 | 1.22 | 1.75 | S | H | 1.25 | 1.00 | 2.00 | 0.62 | S | 1.75 | 1.50 | 2.50 | 2.50 | S | H | 2.62 | 3.00 | 2.00 | 2.88 | S | H | + | 2.60 |
| | 6 | 1.22 | S | H | 1.25 | 1.25 | 1.00 | 2.00 | S | H | 1.75 | 1.38 | 2.25 | 2.50 | H | 2.50 | 3.25 | 2.62 | 1.45 | S | H | 1.50 | 2.00 | 2.51 |
| | 7 | 1.20 | H | 1.25 | 1.12 | 1.25 | 1.00 | S | H | 1.88 | 2.00 | 1.38 | 2.25 | S | 2.75 | 2.50 | 3.25 | 2.75 | S | H | 2.19 | 1.50 | 2.12 | 2.50 |
| | 8 | 1.20 | 2.00 | 1.25 | 1.12 | 1.25 | S | 2.00 | 0.62 | 1.88 | 2.00 | 1.38 | S | 2.50 | 2.50 | 2.50 | 3.25 | 3.00 | 1.12 | 2.56 | 1.94 | 1.62 | 1.38 | 2.49 |
| | 9 | 1.22 | 2.00 | 1.25 | 1.12 | 1.25 | 1.00 | 2.00 | 0.75 | 1.50 | 2.00 | S | 2.50 | 2.50 | 2.50 | 2.50 | 2.38 | S | 2.12 | 1.69 | 1.94 | 1.62 | S | 2.34 |
| | 10 | 1.20 | 2.00 | 1.25 | 1.12 | S | 0.88 | 2.00 | 0.75 | 2.00 | S | 1.38 | 2.50 | + | 2.50 | 2.50 | S | 3.00 | 1.38 | 1.69 | 1.75 | 1.75 | 1.62 | 2.19 |
| | 11 | 1.26 | 2.00 | 1.25 | S | 1.25 | 0.75 | 2.00 | 1.12 | 1.50 | 1.75 | 1.38 | 2.25 | 2.50 | 2.50 | S | 2.38 | 3.00 | 1.25 | 2.36 | 1.75 | S | 1.50 | 2.30 |
| | 12 | 1.07 | 2.00 | S | 1.25 | 1.25 | 0.50 | 1.25 | 1.12 | S | 1.75 | 1.38 | 3.25 | 2.50 | S | 2.50 | 2.12 | 3.25 | 1.88 | 2.36 | S | 2.00 | 1.50 | 2.42 |
| | 13 | 1.07 | S | 1.25 | 1.25 | 1.25 | 0.50 | 1.25 | S | + | 1.75 | 1.38 | 3.25 | 2.50 | 2.50 | 2.50 | 2.75 | 3.25 | 1.75 | S | 1.81 | 2.12 | 1.62 | 2.47 |
| | 14 | 1.06 | 2.00 | 1.50 | 1.25 | 1.06 | 0.50 | S | 1.12 | + | 1.75 | 1.50 | 3.25 | S | 2.50 | 2.50 | 2.50 | 3.25 | S | 1.69 | 1.69 | 1.88 | 1.50 | 2.35 |
| | 15 | 1.12 | 2.00 | 1.25 | 1.25 | 1.06 | S | 1.50 | 1.12 | + | 1.75 | 1.50 | S | 2.50 | 2.00 | 4.00 | + | 3.25 | 1.88 | 1.69 | 2.00 | 2.00 | 1.50 | 2.71 |
| | 16 | 1.14 | 2.12 | 1.25 | 1.25 | 1.06 | 0.88 | 1.50 | 1.00 | + | 1.75 | S | 2.75 | 2.75 | 2.00 | 4.00 | + | S | 1.12 | 2.06 | 1.75 | 2.00 | S | 2.61 |
| | 17 | 1.14 | 2.12 | 1.75 | 1.25 | S | 0.88 | 1.50 | 1.00 | + | S | 1.50 | 2.75 | 2.75 | 2.00 | 4.00 | S | 3.25 | 1.12 | 2.06 | 1.75 | 2.25 | 2.25 | 2.61 |
| | 18 | 1.14 | 2.12 | 1.75 | S | 1.06 | 0.88 | 1.50 | 1.00 | + | 1.75 | 1.50 | 2.75 | 2.75 | 2.00 | S | + | 5.00 | 1.62 | + | 1.75 | S | 2.00 | 3.54 |
| | 19 | 1.14 | 2.12 | S | 1.25 | 1.06 | 0.88 | 1.50 | 1.00 | S | + | 1.38 | 2.75 | 2.75 | S | 4.00 | + | + | 1.62 | + | S | 2.25 | 1.75 | 3.54 |
| | 20 | 1.16 | S | 1.75 | 1.25 | + | 0.88 | 1.50 | S | + | + | 1.38 | 3.00 | 2.75 | 2.00 | 4.00 | + | + | 1.62 | + | 1.50 | 2.25 | 2.00 | 3.54 |
| | 21 | 1.16 | 2.12 | 1.75 | 1.25 | + | 0.88 | S | 1.00 | + | + | 1.50 | 3.75 | S | 2.00 | 4.00 | + | 5.00 | S | + | 1.62 | 2.50 | 1.75 | 3.60 |
| | 22 | 1.02 | 2.12 | 1.75 | 1.25 | + | S | + | 1.00 | + | + | 1.50 | S | 2.75 | 2.00 | 4.00 | + | 5.00 | 2.00 | + | 1.62 | 2.25 | 1.50 | 3.67 |
| | 23 | 1.17 | 2.00 | 1.75 | 1.25 | + | 0.75 | + | 1.50 | + | + | S | 3.75 | 2.75 | 2.00 | 4.00 | + | S | 2.25 | + | 1.62 | 2.25 | S | 3.75 |
| | 24 | 1.17 | + | 1.75 | 1.25 | S | 0.75 | + | 1.50 | + | S | 1.50 | 3.75 | 2.75 | + | 4.00 | S | 5.00 | 2.25 | + | 1.62 | 2.12 | 1.50 | 3.75 |
| | 25 | 0.96 | + | 1.75 | S | + | 0.75 | + | 0.88 | + | + | 1.50 | 3.75 | 2.75 | + | S | + | 5.00 | 2.50 | + | 1.50 | S | 1.88 | 3.75 |
| | 26 | 0.82 | + | S | + | + | 0.75 | + | 0.88 | S | + | 1.50 | 3.25 | + | S | + | + | 5.00 | 2.25 | + | S | 1.25 | 2.12 | 3.63 |
| | 27 | 0.82 | S | 1.75 | + | + | 0.75 | + | S | + | + | 1.50 | 3.25 | + | + | + | + | 5.50 | 2.25 | + | + | 1.62 | 1.75 | 3.63 |
| | 28 | 0.82 | + | 1.75 | + | + | 0.75 | S | 0.88 | + | + | 1.50 | 3.25 | S | + | + | + | + | S | + | + | 1.38 | + | 2.25 |
| | 29 | 0.82 | + | 1.50 | + | + | S | + | 0.88 | + | + | 1.50 | S | + | + | + | + | + | 2.25 | + | + | 1.25 | + | 2.25 |
| | 30 | 0.82 | + | 1.50 | + | + | 0.75 | + | 0.88 | + | + | S | 3.25 | + | + | + | + | S | 2.25 | + | + | 1.12 | + | 2.25 |
| Average for September | | $1.09 | $1.92 | $1.49 | $1.22 | $1.19 | $0.82 | $1.67 | $0.92 | $1.74 | $1.80 | $1.43 | $2.93 | $2.61 | $2.38 | $3.20 | $2.72 | $3.78 | $1.74 | $2.28 | $1.86 | $1.76 | $1.72 | $2.84 |

During the latter five-year period, price conditions were somewhat different. The greatly increased production in New York had resulted in more extreme fluctuations at shorter intervals. Instead of there being three periods of high and low prices, there seemed to be three or four minor periods and one major period. The increased demand for peas had kept prices up during the latter half of the season. Instead of a long decline after the high prices about the first of August, prices fell rapidly for a short period, then rose again quickly, surpassing their former high level. But soon another short slump in the price was experienced, followed by a similar rapid rise to the previous level. Thus the prices fluctuated back and forth in two-week intervals until the shipments ceased during the latter part of September. The very early peas, however, continued to sell at a premium. Peas sold at higher prices previous to July 4, in both five-year periods, than at any period later. It seems that the number of growers who have sandy soil and other favorable growing conditions such that peas can be planted early enough to mature before July 4, are limited.

The 1921–1925 five-year average price for state peas in New York City was approximately double the 1910–1914 five-year average price. This resulted from two conditions. First, wholesale prices of all commodities were about 50 per cent higher during the five years from 1921 to 1925 than they were during the 1910–1914 period. Secondly, the relatively high purchasing power of city people, the better transportation facilities, and other demand factors, stimulated the demand for peas so that prices for state peas were relatively higher than for other farm products.

The trend of wholesale New York City prices for state peas is shown in figure 21, and the price of peas is compared with the price of farm products in figure 22.

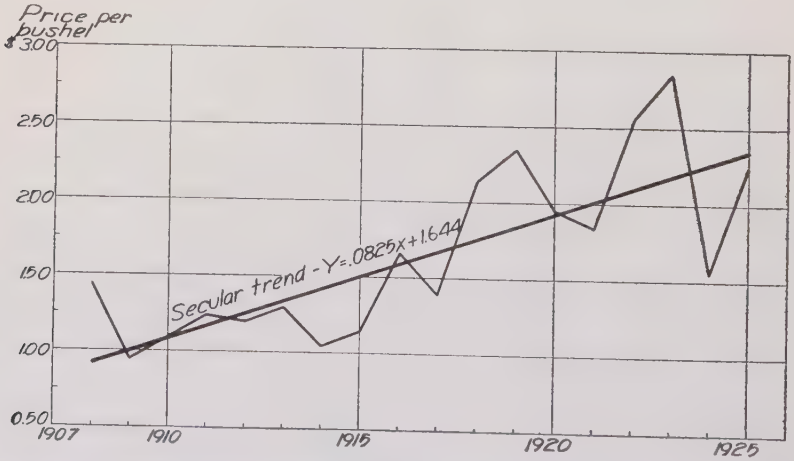



FIGURE 21. AVERAGE YEARLY WHOLESALE PRICES PER BUSHEL BASKET OF STATE PEAS IN NEW YORK CITY, 1908 TO 1925

(Prices from *Producers' Price Current*)

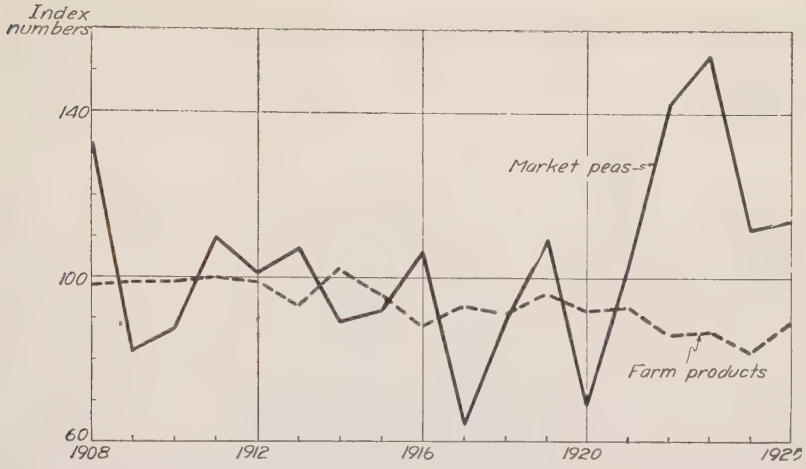



FIGURE 22. RELATION OF PURCHASING POWER OF NEW YORK STATE MARKET PEAS TO PURCHASING POWER OF NEW YORK STATE FARM PRODUCTS
(1910–1914=100. Corrected for secular trend)

The relation of the purchasing power of city people to the price of peas since 1908 is shown in figures 23 and 24. During the years preceding the World War, when wages were about normal and wholesale prices were much lower than they have been in recent years, pea production

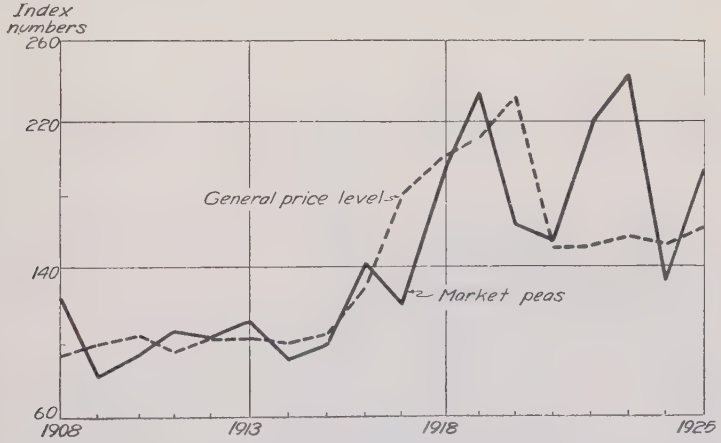



FIGURE 23. RELATION OF WHOLESALE PRICES OF NEW YORK STATE MARKET PEAS TO WHOLESALE PRICES OF ALL COMMODITIES IN THE UNITED STATES
(1910–1914=100)

was very limited. From 1915 to 1920, when prices in general were rising and wages lagged, wholesale prices of peas followed the general price level fairly closely. In 1920, wholesale prices of all commodities fell rapidly, the index dropping from 231 to 150. Since then there has been

little change. Weekly earnings of New York factory workers declined very little in 1920, and were higher in 1925. Since 1921, therefore, the purchasing power of city people has been comparatively high. The

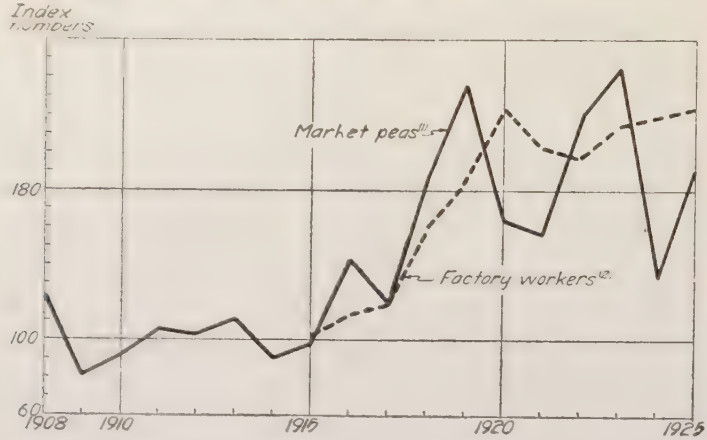



FIGURE 24. RELATION OF WHOLESALE PRICES OF NEW YORK STATE MARKET PEAS TO WEEKLY EARNINGS OF FACTORY WORKERS IN NEW YORK

([1]) From *Producers' Price Current;* average for 1910–1914=100. ([2]) From *Farm Economics* Cornell University; June, 1914 = 100)

resulting high prices for market peas during this period, and their stimulating effect on market-pea acreage, furnish a striking illustration of one of the effects of increased purchasing power of the urban population.

## SEASONAL VARIATION IN THE RECEIPTS OF PEAS IN THE NEW YORK MARKET

The period of the year when shipments of green peas from each of the leading producing sections are received in the New York market, is shown in figure 25. The relation of sequence of receipts to price has already been discussed.

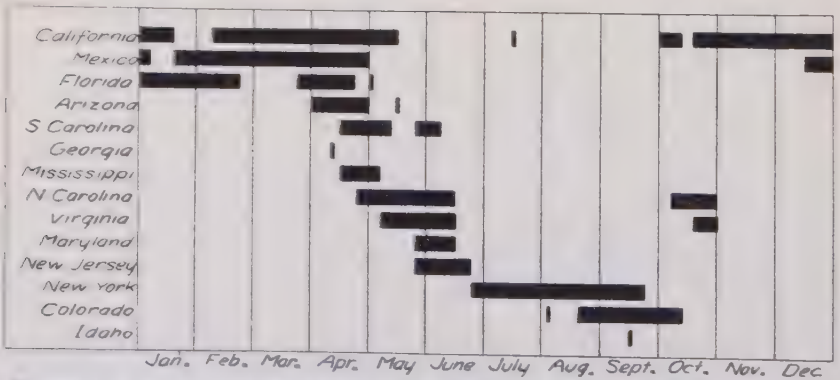



FIGURE 25. TIME SEQUENCE OF RECEIPTS OF GREEN PEAS AT NEW YORK CITY BY STATES OF ORIGIN, 1925

From Market Reports, Bureau of Agricultural Economics, United States Department of Agriculture)

The car-lot unloads of green peas by weeks for the year 1925, and the average for the three years 1923 to 1925, are shown in figures 26 and 27, respectively. When the receipts are heaviest, the prices, as shown in figure 20 (page 94), are lowest.

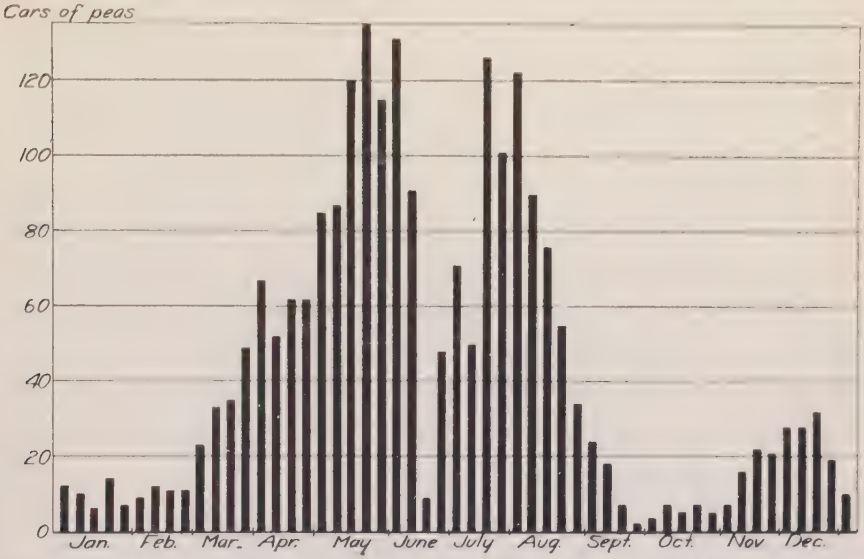



FIGURE 26. CAR-LOT UNLOADS OF GREEN PEAS IN NEW YORK CITY BY WEEKS, 1925
(From Market Reports, Bureau of Agricultural Economics, United States Department of Agriculture)

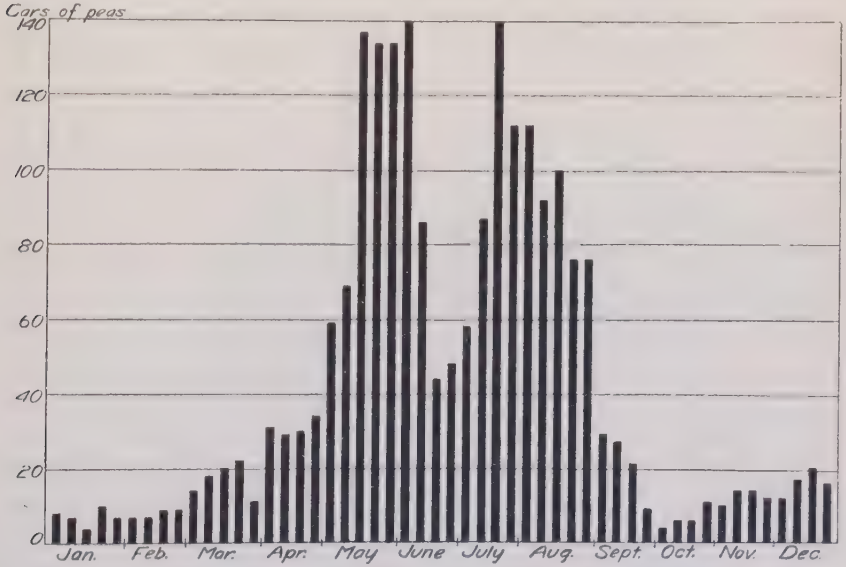



FIGURE 27. CAR-LOT UNLOADS OF GREEN PEAS IN NEW YORK CITY BY WEEKS, AVERAGE FOR 1923–1925
(From Market Reports, Bureau of Agricultural Economics, United States Department of Agriculture)

TABLE 62. DAY-OF-THE-WEEK VARIATIONS IN THE SALES OF GREEN PEAS BY FIVE LARGE NEW YORK CITY COMMISSION HOUSES, SEASON OF 1924–25

| | Monday | | Tuesday | | Wednesday | | Thursday | | Friday | | Saturday | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Number of bushels | Value | Number of bushels | Value | Number of bushels | Value | Number of bushels | Value | Number of bushels | Value | Number of bushels | Value | Number of bushels | Value |
| 1924 | | | | | | | | | | | | | | |
| October | ..... | ..... | 784 | $ 4,366 | 875 | $ 2,979 | 754 | $ 2,725 | 529 | $10,443 | 1,021 | $ 1,019 | 3,963 | $ 21,532 |
| November | 20 | $ 41 | ..... | ..... | 22 | 1,828 | ..... | ..... | 5 | 11 | 21 | 542 | 68 | 2,422 |
| December | 196 | 574 | 410 | 814 | 74 | 370 | ..... | ..... | 84 | 378 | 92 | 345 | 856 | 2,481 |
| 1925 | | | | | | | | | | | | | | |
| January | 36 | 156 | ..... | ..... | ..... | ..... | ..... | ..... | 7 | 28 | ..... | ..... | 43 | 184 |
| February | 637 | 2,929 | 281 | 1,478 | 355 | 1,786 | 134 | 670 | 410 | 2,128 | ..... | ..... | 1,817 | 8,991 |
| March | 1,605 | 5,170 | 31 | 157 | 681 | 1,878 | ..... | ..... | 228 | 741 | 151 | 444 | 2,696 | 8,390 |
| April | 1,793 | 2,999 | 679 | 1,296 | 767 | 1,734 | 1,684 | 4,356 | 1,685 | 4,987 | 727 | 1,668 | 7,335 | 17,040 |
| May | 1,180 | 3,818 | 1,262 | 3,357 | 499 | 1,390 | 1,002 | 3,686 | 2,007 | 5,723 | 1,143 | 3,174 | 7,093 | 21,148 |
| June | 5,075 | 12,055 | 2,269 | 6,342 | 1,861 | 4,062 | 1,807 | 4,810 | 2,782 | 5,964 | 1,692 | 5,131 | 15,486 | 38,304 |
| July | 10,030 | 19,914 | 9,243 | 21,724 | 12,238 | 29,370 | 13,813 | 32,176 | 17,138 | 34,424 | 9,244 | 19,802 | 71,706 | 157,410 |
| August | 7,651 | 13,873 | 6,276 | 11,635 | 4,049 | 7,109 | 4,506 | 7,110 | 6,082 | 12,000 | 7,584 | 14,453 | 36,148 | 66,180 |
| September | 48 | 1,097 | 1,729 | 5,003 | 1,784 | 3,231 | 2,190 | 6,448 | 2,111 | 3,724 | 1,967 | 5,997 | 9,829 | 25,500 |
| Total | 28,271 | $62,626 | 22,964 | $56,172 | 23,205 | $55,677 | 25,890 | $61,981 | 33,068 | $80,551 | 23,642 | $52,575 | 157,040 | $369,582 |
| Average price | ..... | $2.22 | ..... | $2.45 | ..... | $2.39 | ..... | $2.39 | ..... | $2.42 | ..... | $2.22 | ..... | $2.35 |
| Per cent of total quantity | 18.0 | ..... | 14.6 | ..... | 14.8 | ..... | 16.5 | ..... | 21.0 | ..... | 15.1 | ..... | 100.0 | ..... |
| Per cent of total price | ..... | 17.0 | ..... | 15.0 | ..... | 15.0 | ..... | 16.8 | ..... | 21.8 | ..... | 14.4 | ..... | 100.0 |
| Price index (Monday=100) | ..... | 100 | ..... | 110 | ..... | 107 | ..... | 108 | ..... | 109 | ..... | 100 | ..... | ..... |

DAILY VARIATION IN THE RECEIPTS AND PRICES OF PEAS IN NEW YORK CITY

The total sales of green peas by five large wholesale houses in New York City for the 1924–25 season are given by months and by the days of the week in table 62. The variations in the receipts and prices indicate that some days of the week are better market days for green peas than are other days of the week. For the 1924–25 season, the receipts on Friday were greater than on any other day of the week, with Monday coming second and Thursday third, while the Tuesday, Wednesday, and Saturday receipts were about the same.

The Tuesday price was 10 per cent higher than the Monday or the Saturday price, while the Wednesday, Thursday, and Friday prices were 7 per cent, 8 per cent, and 9 per cent, respectively, higher than the Monday or the Saturday price.

It would seem, from these data, that jobbers and retailers tend to concentrate their buying on Tuesdays and Fridays. The peas that arrived from Monday to Thursday sold for from 7 to 10 per cent more than the peas that arrived on Friday, Saturday, or Sunday.

A study of the wholesale price quotations in the *Producers' Price Current* from 1908 to 1925 shows similar results (table 63). The average prices

TABLE 63. Variation in the Wholesale Price of State Peas, by Days, 1908 to 1925*

| | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|---|---|---|---|---|---|---|
| Average price per bushel | $1.68 | $1.75 | $1.69 | $1.66 | $1.68 | $1.34 |
| Price index (Monday = 100) | 100 | 104 | 101 | 99 | 100 | 80 |

* Prices from *Producers' Price Current.*

per bushel for state peas during the New York State pea season, for each day of the week, show Tuesday to be about 4 per cent better than Monday, while the Wednesday, Thursday, and Friday markets were about the same as Monday's. The Saturday market was only 80 per cent as good as the Monday market. The fact that receipts tend to pile up on Friday, while the buyers are practically all supplied with peas before Friday morning so that they will be prepared for their Saturday customers, seems to make the Saturday market especially poor during the season of heavy receipts.

In the off-season period of the year, when the supplies are light, retailers can buy their peas direct from the wholesalers, and so the Saturday market is nearly as good as those of the other days.

In general, therefore, the same conclusions can be drawn from this study as from the data of five wholesalers — that arrivals for the first part of the week are likely to sell for a higher price than arrivals for the latter part of the week. Tuesday seems to be a particularly strong market day, and Saturday a very poor market day, during the summer months.

RELATION OF RECEIPTS TO PRICES OF STATE PEAS IN NEW YORK CITY, SEASON OF 1926

Receipts of green peas in New York City from July 1 to August 20, 1926, were greater than for the same period in any previous year. As a result, the wholesale prices were lower than they were in the preceding five years. The pea season was from two to three weeks later than normal. Then the hot weather in July tended to mature the late varieties

TABLE 64. RECEIPTS AND WHOLESALE PRICES OF MARKET PEAS IN NEW YORK CITY, JULY 1 TO AUGUST 20, 1926

| | | Number of cars | Average price per bushel |
|---|---|---|---|
| July | 1 | 1 | $2.25 |
| | 2 | 3 | 1.94 |
| | 3 | 3 | 2.68 |
| | 6 | 3 | 2.94 |
| | 7 | 25 | 2.62 |
| | 8 | 23 | 3.21 |
| | 9 | 25 | 2.08 |
| | 10 | 30 | 1.31 |
| | 12 | 24 | 1.58 |
| | 13 | 31 | 1.58 |
| | 14 | 35 | 1.42 |
| | 15 | 35 | 1.33 |
| | 16 | 29 | 1.46 |
| | 17 | 52 | 1.25 |
| | 19 | 14 | 1.25 |
| | 20 | 35 | 1.25 |
| | 21 | 46 | 1.04 |
| | 22 | 41 | 1.08 |
| | 23 | 25 | 0.96 |
| | 24 | 48 | 0.96 |
| | 26 | 26 | 1.01 |
| | 27 | 44 | 0.92 |
| | 28 | 39 | 1.00 |
| | 29 | 39 | 1.00 |
| | 30 | 16 | 1.04 |
| | 31 | 46 | 1.31 |
| August | 2 | 44 | 1.34 |
| | 3 | 27 | 1.21 |
| | 4 | 31 | 0.92 |
| | 5 | 30 | 1.06 |
| | 6 | 10 | 0.79 |
| | 7 | 8 | 1.09 |
| | 9 | 14 | 1.41 |
| | 10 | 13 | 2.50 |
| | 11 | 15 | 2.00 |
| | 12 | 18 | 2.04 |
| | 13 | 7 | 1.75 |
| | 14 | 9 | 1.68 |
| | 16 | 13 | 1.75 |
| | 17 | 3 | 1.75 |
| | 18 | 5 | 2.33 |
| | 19 | 5 | 2.00 |
| | 20 | 4 | 2.16 |

earlier than usual, which resulted in the late and the early varieties maturing at more nearly the same time. Yields in 1926 were higher than the average. This combination of circumstances resulted in record shipments all thru July and part of August, forcing the prices down to a level that would hardly pay the cost of shipping, much less the cost of picking and growing.

The daily car-lot receipts, and the less-than-car-lot receipts in car-lot equivalents, of green peas in New York City, and the wholesale prices as reported by the federal Bureau of Agricultural Economics, from July 1 to August 20, 1926, are shown in table 64.

The relation of the receipts to the prices are summarized in table 65. For seventeen days when the price averaged less than $1.25 per bushel, the receipts averaged 31.2 cars per day. For thirteen days when the average price ranged from $1.25 to $1.75 per bushel, the average daily receipts were 24.8 cars. For thirteen days when the price averaged more than $1.75 per bushel, the receipts averaged 11 cars per day. For the forty-three market days from July 1 to August 20, the average price was $1.44 per bushel and the receipts averaged 23.1 cars per day.

TABLE 65. RELATION OF CAR-LOT RECEIPTS TO WHOLESALE PRICES OF MARKET PEAS IN NEW YORK CITY, JULY 1 TO AUGUST 20, 1926

| Price per bushel | Number of days included | Average price per bushel | Cars of peas per day |
|---|---|---|---|
| Less than $1.25 | 17 | $1.05 | 31.2 |
| $1.25 to $1.75 | 13 | 1.51 | 24.8 |
| More than $1.75 | 13 | 2.37 | 11.0 |

In general, therefore, each additional car of peas on the market lowered the wholesale price 6.5 cents per bushel. Conversely, a reduction in the supply of peas resulted in an average rise in price of 6.5 cents per bushel.

## APPENDIX

### AREAS OF PRODUCTION, TOTAL PRODUCTION, AND PRICES, OF CANNING-FACTORY PEAS

The areas of production of canning-factory peas in the United States are shown in table 66. Wisconsin has the largest acreage, producing nearly as many peas for the canning factory as do all the other States combined. New York ranks next, with 31,970 acres out of 206,570 acres for the whole United States in 1928, or 15 per cent of

TABLE 66. ACREAGE OF GREEN PEAS FOR CANNING IN THE UNITED STATES FROM 1918 TO 1928*

| | 1918 | 1919 | 1920 | 1921 | 1922 | 1923 | 1924 | 1925 | 1926 | 1927 | 1928 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Number of acres | | | | | | | | | | |
| California | 3,620 | 3,400 | 2,770 | 2,360 | 3,970 | 4,410 | 5,260 | 4,890 | 2,680 | 750 | 1,230 |
| Colorado | 2,070 | 1,920 | 1,870 | 2,870 | 2,940 | 3,680 | 3,140 | 3,520 | 2,570 | 1,900 | 3,000 |
| Delaware | 4,480 | 4,630 | 5,130 | 3,630 | 3,960 | 3,880 | 2,500 | 2,500 | 2,000 | 1,700 | 2,060 |
| Illinois | 9,020 | 5,770 | 6,690 | 6,310 | 8,420 | 10,190 | 10,790 | 8,050 | 9,200 | 8,830 | 10,240 |
| Indiana | 7,080 | 4,100 | 5,010 | 2,280 | 4,100 | 4,760 | 6,190 | 4,320 | 6,000 | 1,880 | 3,760 |
| Maine | ..... | ..... | ..... | ..... | ..... | 340 | 1,030 | 1,770 | 1,410 | 720 | 920 |
| Maryland | 7,000 | 6,930 | 6,120 | 5,470 | 7,670 | 8,050 | 9,530 | 11,600 | 8,800 | 8,000 | 8,720 |
| Michigan | 9,050 | 10,080 | 9,860 | 8,530 | 8,780 | 10,530 | 12,220 | 13,010 | 14,430 | 8,400 | 11,930 |
| Minnesota | 1,220 | 1,120 | 1,030 | 650 | 1,410 | 2,030 | 5,200 | 7,880 | 8,570 | 6,980 | 7,890 |
| New Jersey | 1,710 | 1,250 | 720 | 760 | 700 | 610 | 590 | 280 | 350 | 500 | 350 |
| New York | 26,000 | 22,020 | 25,930 | 18,290 | 30,700 | 33,460 | 38,030 | 33,310 | 34,990 | 25,540 | 31,970 |
| Ohio | 5,020 | 4,770 | 5,070 | 4,040 | 4,530 | 5,300 | 5,830 | 4,850 | 4,210 | 2,990 | 3,320 |
| Pennsylvania | 1,170 | 900 | 340 | 290 | 360 | 510 | 1,280 | 1,690 | 1,400 | 1,320 | 1,680 |
| Utah | 5,250 | 4,850 | 3,540 | 3,680 | 6,660 | 7,780 | 10,360 | 10,750 | 9,510 | 8,460 | 10,150 |
| Wisconsin | 52,450 | 50,840 | 60,920 | 63,790 | 72,050 | 91,160 | 109,870 | 111,710 | 106,120 | 80,000 | 101,000 |
| Other States | 1,480 | 1,440 | 1,520 | 910 | 1,760 | 3,140 | 4,770 | 6,500 | 6,640 | 5,840 | 8,350 |
| Total | 136,620 | 124,020 | 136,520 | 123,860 | 158,010 | 189,830 | 226,590 | 226,630 | 218,880 | 163,810 | 206,570 |

* From Bureau of Agricultural Economics, United States Department of Agriculture. Data for 1924 from *Crops and Markets*, December, 1927. Data for 1925, 1926, 1927, and 1928, from *Crops and Markets*, December, 1928.

the total acreage. Michigan and Illinois follow. Other important producing States are Utah, Maryland, Minnesota, Indiana, Ohio, and Colorado.

In New York, the canning-factory-pea area extends from Oneida County, in the central part of the State, across the northwestern part of the State to Lake Erie and the Niagara River. In general, the soil in these localities is fairly deep, well drained, and usually well supplied with lime.

The production of canning-factory peas for the various producing States is given in table 67.

TABLE 67. PRODUCTION OF GREEN PEAS FOR CANNING IN THE UNITED STATES FROM 1918 TO 1928*

| | 1918 | 1919 | 1920 | 1921 | 1922 | 1923 | 1924 | 1925 | 1926 | 1927 | 1928 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Hundreds of tons | | | | | | | | | | |
| California | 40 | 27 | 42 | 14 | 67 | 31 | 37 | 34 | 32 | 10 | 12 |
| Colorado | 21 | 12 | 17 | 23 | 21 | 18 | 25 | 32 | 23 | 17 | 29 |
| Delaware | 40 | 32 | 56 | 47 | 24 | 23 | 25 | 20 | 10 | 26 | 18 |
| Illinois | 108 | 52 | 54 | 44 | 67 | 61 | 86 | 56 | 83 | 62 | 90 |
| Indiana | 71 | 37 | 35 | 23 | 37 | 38 | 62 | 35 | 54 | 15 | 35 |
| Maine | .... | .... | .... | .... | .... | 4 | 9 | 16 | 6 | 6 | 8 |
| Maryland | 70 | 55 | 67 | 55 | 54 | 48 | 95 | 104 | 88 | 112 | 82 |
| Michigan | 81 | 101 | 89 | 51 | 70 | 42 | 98 | 65 | 115 | 59 | 93 |
| Minnesota | 12 | 11 | 8 | 5 | 11 | 22 | 52 | 47 | 34 | 56 | 81 |
| New Jersey | 17 | 11 | 8 | 8 | 4 | 4 | 6 | 2 | 4 | 6 | 4 |
| New York | 260 | 154 | 311 | 201 | 276 | 301 | 380 | 267 | 315 | 204 | 242 |
| Ohio | 50 | 43 | 41 | 32 | 32 | 48 | 58 | 24 | 29 | 24 | 24 |
| Pennsylvania | 12 | 9 | 3 | 4 | 3 | 5 | 13 | 9 | 13 | 18 | 15 |
| Utah | 100 | 53 | 74 | 55 | 93 | 117 | 124 | 172 | 124 | 102 | 130 |
| Wisconsin | 629 | 508 | 731 | 574 | 865 | 820 | 1,318 | 1,117 | 1,167 | 800 | 1,018 |
| Other States | 13 | 14 | 12 | 7 | 18 | 25 | 52 | 65 | 53 | 70 | 74 |
| Total | 1,524 | 1,119 | 1,548 | 1,143 | 1,642 | 1,607 | 2,440 | 2,065 | 2,150 | 1,587 | 1,955 |

* From Bureau of Agricultural Economics, United States Department of Agriculture. Data for 1925, 1926, 1927, and 1928 from *Crops and Markets*, December, 1928.

The upward trend in the production of peas for canning has not been so striking as was that in the production of market peas. In figure 28 are shown the relative

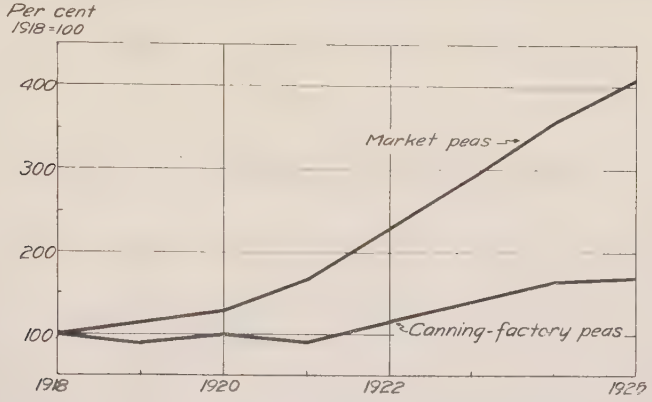



FIGURE 28. RELATIVE ACREAGE TREND OF MARKET PEAS AND CANNING-FACTORY PEAS IN THE UNITED STATES, 1918 TO 1925

acreage trends for green peas for market and peas for canning in the United States for the years 1918 to 1925 inclusive. In figure 29 are shown the relative acreage trends in New York.

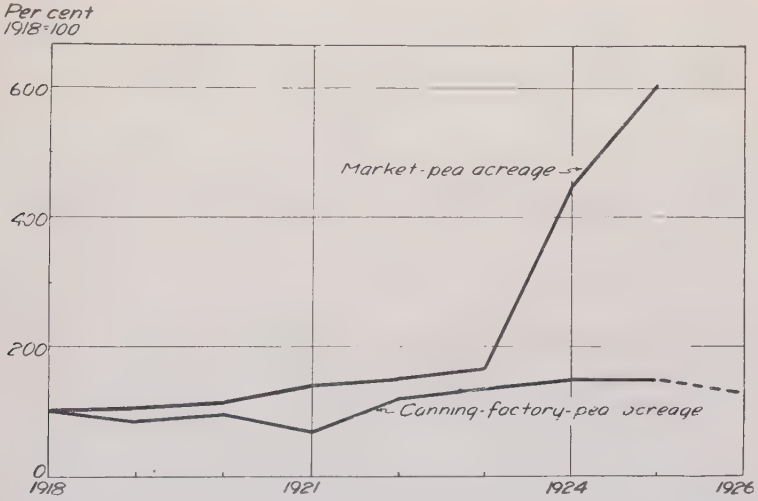



FIGURE 29. RELATIVE ACREAGE TREND OF MARKET PEAS AND CANNING-FACTORY PEAS IN NEW YORK STATE, 1918 TO 1925

(From Market Reports, Bureau of Agricultural Economics, United States Department of Agriculture)
The broken line represents the 1926 estimate

In the United States as a whole, the acreage of peas for canning remained nearly constant until about 1921, when it began to increase. By 1928 it had reached 151 per cent of the 1918 acreage. The 1928 market-pea acreage, however, was 1022 per cent of the 1918 acreage.

In New York the acreage of peas for canning has not increased much since 1918. The index for 1928 was 123 as compared with 100 for 1918. The index for the market-pea acreage, however, increased from 100 to 682 for the same period.

The fact that the increase in acreage of canning-factory peas has not been so great as the increase in acreage of market peas, is the direct result of the relative prices of the two commodities during the past decade. The relation of the wholesale prices of No. 2 canned peas, f. o. b. factory, in the United States, to the wholesale prices of market peas in New York City, is shown in figure 30. During the World War and

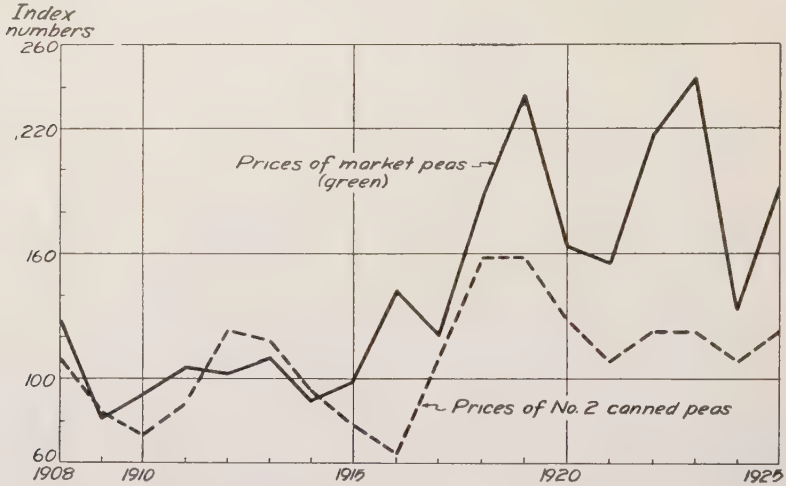



FIGURE 30. RELATION OF WHOLESALE PRICES OF MARKET PEAS IN NEW YORK CITY, TO WHOLESALE PRICES OF NO. 2 CANNED PEAS, F. O. B. FACTORY, IN THE UNITED STATES, 1908 TO 1925

(1910–1914 = 100)

since, prices of canned peas have been considerably lower than prices of market peas. Practically the same relation has existed in the price per ton received by growers of canning-factory peas, and the wholesale prices received by growers for market peas (figure 31).

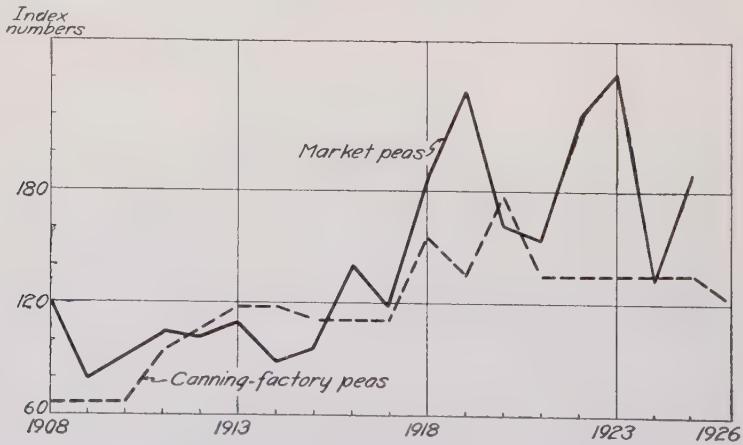



FIGURE 31. RELATION OF WHOLESALE PRICES OF MARKET PEAS IN NEW YORK CITY, TO CONTRACT PRICE PER TON OF CANNING-FACTORY PEAS, 1908 TO 1925

(1910–1914 = 100)

(From *Producers' Price Current* and a New York canning factory)

Prices of No. 2 canned peas have not even kept pace with the general price level. In figure 32 is shown the relation of the prices of No. 2 peas to the general price level from 1889 to 1925. During the decade preceding 1898, the prices of canned peas were considerably above the general price level. During the next fifteen years, the prices of canned peas followed fairly closely the prices of all commodities, except for the wider fluctuations of canned peas from year to year. During the last decade, however, the price of canned peas has been consistently below the price level of all commodities.

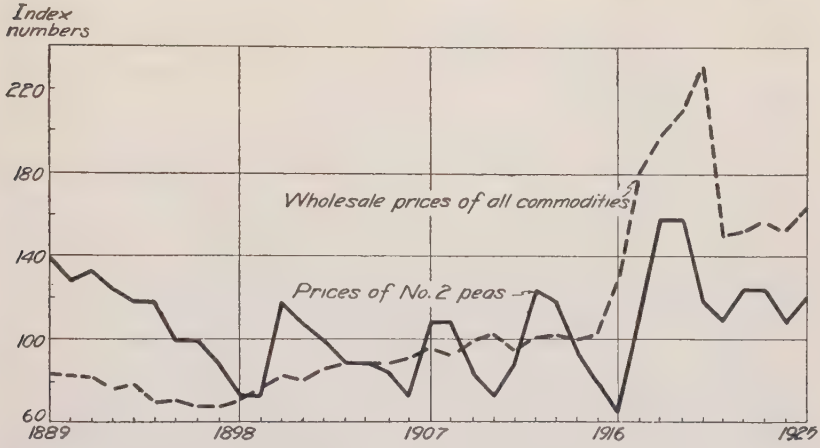



FIGURE 32. RELATION OF THE JANUARY PRICES OF NO. 2 PEAS, F. O. B. FACTORY, TO THE WHOLESALE PRICES OF ALL COMMODITIES IN THE UNITED STATES, 1889 TO 1925

(1910–1914 = 100)

The same factors that have influenced the upward trend in the acreage of market peas have been influential also in producing the disparity between the prices of canned peas and the prices of other commodities, including market peas. Improved transportation facilities have resulted in greatly increased shipments of fresh fruits and vegetables, especially during the periods when these were formerly considered as out of season. This development came at a time when the wages of city people were relatively high. The natural result was that more fresh vegetables were purchased relatively to canned goods, than was formerly the case.

Ten or twenty years ago most persons were accustomed to buying fresh green peas only during the early summer, when they could be supplied by near-by gardeners. If they desired peas at any other time, they expected to buy canned peas. However, with improved transportation facilities and better buying power, conditions have changed entirely. Green peas are now produced far from the markets and are offered to consumers every week in the year, in the larger markets. Obviously, those who can afford them prefer the fresh to the canned peas.

Many other vegetables are available nowadays the year round. Persons who formerly depended on canned peas when other vegetables were out of season, can now have a greater variety of both fruits and fresh vegetables.

## PRODUCTION OF SEED PEAS

The production of seed peas, unlike the production of seed for such crops as wheat and potatoes, is carried on quite apart from the production of green peas for market or green peas for the canning factory. The methods of growing, harvesting, and marketing are also very different when peas are produced for seed rather than for market or canning.

### *Areas of production*

The chief areas of production of seed peas in 1923 were in the mountain States.[9] Idaho alone had 40,500 of the 82,160 acres of seed peas grown in the United States in 1923. The acreage in Idaho and Montana together made up 71 per cent of the total acreage of seed peas for that year. Other important producing States are Washington, California, Wisconsin, and Michigan, with a few acres in Colorado and New York. Most of these producing areas are found where there are a cool growing season and a limestone soil, and where the markets for green peas are too far removed for profitable production at normal prices. The arid climate in the high irrigated valleys of the Rocky Mountains is particularly favorable for seed-pea production. Dry weather during the harvest period permits the seed to mature in excellent condition. Moreover, the cool climate seems to be unfavorable for most of the insect pests that are found in other pea regions.

In Idaho and Montana the seed peas are grown under irrigation at an altitude of from 4000 to 5000 feet above sea level, with a growing season of from 75 to 120 days. But the greater amount of sunshine, combined with adequate moisture in the soil, makes the peas grow rapidly, producing high yields of seed of excellent quality. The Upper Snake River Valley, in Idaho, is the largest and most concentrated area of seed-pea production. In 1925 there were approximately 60,000 acres of land in this valley planted to peas for seed production, or nearly half of the total seed-pea acreage of the United States. The four counties of Fremont, Madison, Jefferson, and Bonneville include practically all of this acreage. In Montana the Gallatin and Bitter Root Valleys are the principal seed-pea-producing sections. Fewer acres are grown than in Idaho, but the same methods of growing and handling the crop are followed.

### *Acreage and production trends*

The rapid increase in the combined production of green peas for market and green peas for canning in the United States, has been a great stimulus for increased production of seed peas. In figure 33 is shown the acreage trend of seed-pea production

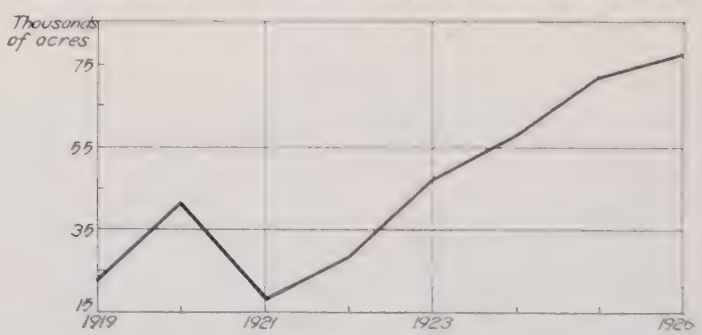



FIGURE 33. ACREAGE OF SEED PEAS IN IDAHO, 1919 TO 1926

(From United States Department of Agriculture, *Agricultural Yearbook*, 1924, and *Crop Reports*)

in Idaho from 1919 to 1926. In 1919 Idaho had only 23,000 acres, as compared with 76,000 in 1926 — an increase of 330 per cent in eight years.

Data for the United States were not available prior to 1917 and have not been reported since 1923, and so the trend of seed-pea production in other areas can only be approximated. In table 68 both the acreage and the production of seed peas are given for the years 1917 to 1923. These data indicate that the acreage reached the highest point in 1920, just previous to the general fall in prices. The severe agricultural depression which followed is shown very clearly in the effect on seed-pea acreage for 1921, this having dropped from 113,844 acres in 1920 to 35,080 acres in 1921.

[9] Weather, crops, and markets, August 25, 1923. Acreage reports for seed peas were discontinued after 1923, due to the difficulty of getting reports from seed companies.

TABLE 68. COMMERCIAL ACREAGE AND PRODUCTION OF SEED PEAS IN THE UNITED STATES, 1917 TO 1923*

| Year | Acres planted | Production |
|---|---|---|
| | | (Thousands of pounds) |
| 1917 | 110,129 | 48,868 |
| 1918 | 102,095 | 58,127 |
| 1919 | 104,172 | 47,968 |
| 1920 | 113,844 | 87,310 |
| 1921 | 35,680 | 27,197 |
| 1922 | 54,462 | 46,588 |
| 1923 | 86,659 | 66,300 |
| Seven-year average | 86,720 | 54,623 |

* From United States Department of Agriculture, *Agriculture Yearbook, 1924.*

This tremendous fall in acreage was the result of several forces working together. First, the 1920 production of seed peas was too great for the needs of the country, even if the acreage of canning-factory and market peas had been planted at the same rate. But the combined acreage of these two crops was reduced about 11 per cent in 1921 below that for 1920. Hence, with 1,455,167 bushels of seed peas produced in 1920, as compared with a production of 799,467 bushels the year before, it was quite evident to the seed companies that there would be a tremendous carry-over of seed for the next year. In the face of such a possible carry-over, their only alternative was to reduce the number of acres of seed peas to be contracted for the next year. But such a cure was almost worse than the remedy. Reducing the acreage of seed peas planted in 1920, 113,844 acres, to 35,680 acres in 1921, meant a further decrease in the demand for the 1920 seed produced, of 234,492 bushels, or half as much as the total amount of seed peas produced the next year.

This combination of circumstances resulted in a carry-over for 1921 of 826,112 bushels of seed, very nearly the equivalent of the total requirement for seed peas the following year, as shown in table 69. And, like a pendulum that swings too far, the acreage planted that year was no doubt smaller than was justified by conditions.

TABLE 69. VARIATION IN PRODUCTION AND REQUIREMENTS OF SEED PEAS FROM 1919 TO 1923*

| | 1919 | 1920 | 1921 | 1922 | 1923 |
|---|---|---|---|---|---|
| | (Bushels) | (Bushels) | (Bushels) | (Bushels) | (Bushels) |
| Seed requirements for canning-pea areas | 488,000 | 537,624 | 481,860 | 618,480 | 744,081 |
| Seed requirements for market-pea areas | 40,290 | 44,802 | 40,155 | 51,540 | 62,007 |
| Seed requirements for seed-pea areas | 312,516 | 341,532 | 107,040 | 163,386 | 259,977 |
| Total seed requirements | 840,806 | 923,958 | 629,055 | 833,406 | 1,066,068 |
| Production of seed peas the preceding year | 968,800 | 799,467 | 1,455,167 | 455,283 | 776,467 |
| Carry-over or shortage of seed peas and amount for gardens | +127,994 | −124,491 | +826,112 | −380,123 | −289,601 |

* Calculated from data obtained from the United States Department of Agriculture, *Agriculture Yearbook, 1924,* and from *Crops and Markets,* December, 1924.

### *Method of growing seed peas in Idaho and Montana*

Seed-pea production in the Western States is carried on under irrigation. In the Upper Snake River Valley in Idaho, and the Gallatin and Bitter Root Valleys in Montana, where the soil is rich in limestone and where the nights are cool during the growing season, the production of seed peas has grown into a highly specialized industry.

The peas are grown by farmers under contract with a seed company. The company furnishes the seed and deducts the cost from the returns when the crop is delivered

at the company's warehouse. The number of acres to be grown by each farmer, the varieties of seed that he is to grow, and the price that he is to receive for the peas when produced, are determined largely by the company but are agreed to by the grower. Frequently the growers act together as a unit, for purposes of collective bargaining, in their efforts to obtain a better price contract.

A field man employed by the seed company also directs such operations as irrigating, roguing, harvesting, and threshing. After threshing, the seed is delivered to the company warehouse, where it is cleaned and graded on special machines, and afterward carefully hand-picked by experienced workers.

The peas are drilled in with an ordinary grain drill, at rates varying from 3 to 4.5 bushels per acre depending on the size of the peas, the character of the soil, and the amount of moisture available. Small-seeded varieties, which have more seed to a bushel, are usually planted at a lower rate. Late-maturing varieties are planted from May 1 on, and are followed with the early varieties not later than June 1.

The seed is covered to a depth of from two to three inches, and the ground is harrowed frequently until the peas are about four inches high. This harrowing is for the purpose of controlling the weeds, since no cultivating is done after the tendrils have begun to twine about the adjacent plants.

Irrigation is started usually when the peas begin to blossom. The water is directed into the pea field from an irrigation ditch by means of a head gate or a dam. Since there are no furrows for the water to run thru, the field is simply flooded for a few hours, or even for a day if it is very dry, and then the water is turned off. Commonly, a second irrigation is given just as the peas begin to pod. Considerable variation is found, however, in both the time and the method of irrigating. Soils and seasons differ, and the water supply varies in different localities.

The work of roguing comes next. This process is peculiar to seed-pea production, just as picking is peculiar to the production of market peas. It consists in weeding out objectionable plants from the pea crop at blossoming time. A gang of men and boys is taken from field to field, to pull out all vines which show by their blossoms that they are of a different variety or type than was supposed to have been planted. Obviously, the purpose of roguing is to keep the varieties and strains pure and uniform. Mixed stocks have little sale value as seed.

Such mixtures may come about at threshing time, in the warehouse, or from volunteer plants where peas have been planted on the same land for two or more years in succession. Or the foreign variety may actually be what is known as a "rogue"—that is, consisting of degenerate peas of uncertain origin, which may be reversions, crosses, sports, mixtures, or just objectionable-looking plants. The roguing crew, usually consisting of from six to twelve men under the direction of one or two foremen, place themselves in a line about six feet apart and proceed slowly across the field, pulling the undesirable plants and carrying them from the field. The men in line are followed closely by the foremen, or by "trailers" who are experienced roguers. These men explain what is to be pulled, and remove any rogues which the other workers may have missed.

Occasionally fields are rogued twice or three times, in order to make sure that all undesirable plants are eliminated.

The peas are harvested in much the same way as hay is harvested. When the pods are fully mature, and as the peas begin to harden, the vines are cut with an ordinary mowing machine equipped with pea guards and a "curler." The special guards lift the vines off the ground and facilitate cutting, while the curler turns the pea vines over and out of the way of the horses and the mower, to avoid loss of seed thru shattering.

The weather is usually rather warm and free from rain at harvest time, and so the vines are put into cocks and allowed to cure slowly. This process of curing is very important in the determination of the quality so characteristic of western-grown seed.

Threshing is done with a regular grain separator, equipped especially for peas by supplying proper screens and substituting blank concaves, leaving only one row of concave teeth below the cylinder. Pulleys are changed so as to decrease the speed of the cylinder without reducing the speed of the remainder of the machinery. Extra care must be taken to avoid breaking or splitting the seed.

When the peas are threshed, the seed is delivered to the company warehouse. Here it is weighed, and run thru large cleaners to remove cracked and split peas and foreign material and to grade the peas to a uniform size. All dockage thus removed is reweighed and returned to the grower, who is credited with the net amount of good, clean seed,

The peas are later hand-picked to remove any peas that are not true to type and those that have been damaged or otherwise appear undesirable for seed. This dockage also is deducted from the farmer's account before the checks are mailed.

Each farmer's seed is kept separate thruout these processes. The lots are also tagged and stored separately until the time of shipment.

The peas are grown in rotation with potatoes, sugar beets, alfalfa, and wheat or oats. A common rotation in the Upper Snake River Valley is: potatoes, sugar beets, seed peas, sugar beets, wheat or oats (seeded to alfalfa), alfalfa (three or more years, then fall-plowed for potatoes). Where sugar beets or potatoes are not grown, the rotation is varied somewhat to fit the conditions. On most farms, however, peas precede the grain crop which is used as a nurse crop for alfalfa.

*Varieties of seed peas*

The important varieties of peas grown for seed in Idaho and Montana are given in table 70. All of the market varieties, and all of the canning-factory varieties except Alaska, are of the wrinkled type. The field-pea varieties, however, are all of the smooth type. These are grown mostly for hay or silage, or to be fed dry to livestock. They are seldom fit for canning or for immediate consumption as green peas.

TABLE 70. IMPORTANT PEA VARIETIES GROWN FOR SEED IN IDAHO AND MONTANA*

| Variety | Seed | Maturity |
|---|---|---|
| Canning varieties: | | |
| Alaska | Smooth (sometimes slightly pitted) | Early |
| Canner's Surprise | Wrinkled | Early |
| Canner's Gem | Wrinkled | Medium early |
| Perfection | Wrinkled | Medium early |
| Advancer | Wrinkled | Medium early |
| Admiral | Wrinkled | Medium late |
| Horsford's Market Garden | Wrinkled | Late |
| Rice's 13 | Wrinkled | Late |
| Garden varieties: | | |
| American Wonder | Wrinkled | Extra early |
| Nott's Excelsior | Wrinkled | Early |
| Gradus | Wrinkled | Early |
| Thomas Laxton | Wrinkled | Early |
| Peter Pan | Wrinkled | Medium early |
| Hundredfold | Wrinkled | Medium early |
| Laxtonian | Wrinkled | Medium early |
| Alderman | Wrinkled | Medium late |
| Telephone | Wrinkled | Medium late |
| Champion of England | Wrinkled | Late |
| Stratagem | Wrinkled | Late |
| Field varieties (seed used for human food): | | |
| Canada Field | Smooth | Medium late |
| Arthur | Smooth | Medium late |
| Canada Beauty | Smooth | Medium late |
| Scotch Green | Smooth | Medium late |
| White Marrowfat | Smooth | Late |

* *From* Producing seed peas in Montana. By Clyde McKee. Univ. Montana Agr. Exp. Sta. Cir. 128. 1925.

*Costs of growing and cleaning pea seed in Idaho*

No study has been reported of the cost of growing seed peas. The main operations of growing are not very different from those involved in the production of canning-factory peas. Labor and land costs are the items that probably differ the most. The roguing, however, is a special cost which averages approximately 35 cents per acre.

The costs of cleaning and hand-picking are borne by the seed companies. These companies also loan the seed and the bags to the growers, which adds to their cost of

TABLE 71. PRICES PAID TO IDAHO GROWERS OF SEED PEAS FROM 1912 TO 1926

| Variety | 1912 | 1913 | 1914 | 1915 | 1916 | 1917 | 1918 | 1919 | 1920 | 1921 | 1922 | 1923 | 1924 | 1925 | 1926 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Price per bushel | | | | | | | | | | | | | | |
| Alaska | $1.40 | $1.40 | $1.12 | $1.40 | $1.26 | $1.68 | $2.80 | $3.08 | $3.08 | $1.68 | $1.40 | $1.40 | $1.68 | $1.96 | $1.96 |
| Canner's Surprise | 1.40 | 1.40 | 1.26 | 1.40 | 1.40 | 1.68 | 3.08 | 3.64 | 3.64 | 1.96 | 1.68 | 1.68 | 1.96 | 2.24 | 2.24 |
| Canner's Gem | 1.68 | 1.68 | 1.40 | ..... | 1.40 | 1.83 | 3.35 | 3.08 | ..... | ..... | 1.40 | 1.40 | 1.68 | 2.10 | 2.10 |
| Admiral (White) | 1.40 | 1.40 | 1.12 | 1.12 | 1.12 | 1.40 | 2.38 | 2.52 | 2.52 | 1.40 | 1.26 | 1.26 | 1.54 | 1.82 | 1.82 |
| Advancer | 1.40 | 1.40 | 1.12 | 1.12 | 1.12 | 1.68 | 2.52 | 2.80 | 1.68 | 1.26 | 1.54 | ..... | ..... | 1.82 | 1.82 |
| Perfection | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 2.80 | 2.80 | 1.68 | 1.26 | 1.26 | 1.54 | 1.82 | 1.82 |
| Horsford's Market Garden | 1.40 | 1.40 | ....* | 1.12 | 1.12 | 1.54 | 2.52 | 2.80 | 2.80 | 1.68 | 1.26 | 1.26 | 1.54 | 1.82 | 1.82 |
| Rice's 13 | ..... | ..... | ..... | ..... | ..... | ..... | 2.52 | 2.80 | 2.80 | 1.68 | 1.26 | 1.26 | 1.54 | 1.82 | 1.82 |
| American Wonder | 1.82 | 1.96 | 1.68 | 1.86 | 1.86 | 2.24 | 3.08 | 3.64 | 3.92 | 2.52 | 2.10 | 1.96 | 2.24 | 2.52 | 2.52 |
| Nott's Excelsior | 1.82 | 1.86 | 1.68 | 1.86 | 1.86 | 2.24 | 3.08 | 3.64 | 3.92 | 2.52 | 2.10 | 1.96 | 2.24 | 2.52 | 2.52 |
| Gradus | ..... | 1.96 | 1.68 | 1.86 | 1.86 | 2.24 | 3.36 | 3.92 | 3.92 | 2.52 | 1.96 | 1.96 | 2.38 | 2.52 | 2.52 |
| Thomas Laxton | 1.68 | 1.96 | 1.68 | 1.86 | 1.86 | 1.96 | 3.08 | 3.92 | 3.92 | 2.24 | 1.96 | 1.96 | 2.24 | 2.52 | 2.52 |
| Laxtonian | ..... | 1.68 | 1.68 | 1.86 | 1.86 | 2.52 | 3.92 | 4.76 | 4.76 | 2.80 | 2.24 | 2.24 | 2.52 | 2.80 | 2.80 |
| Telephone (Alderman) | 1.68 | 1.68 | 1.25 | 1.40 | 1.40 | 1.68 | 2.80 | 3.64 | 3.64 | 2.24 | 1.68 | 1.68 | 1.96 | 2.24 | 2.24 |
| Champion of England | 1.40 | 1.40 | ..... | 1.12 | 1.12 | 1.40 | 2.80 | 2.80 | 2.80 | 1.68 | 1.40 | 1.40 | 1.68 | 1.96 | 1.96 |
| Stratagem | 1.40 | 1.40 | ..... | 1.12 | 1.12 | 1.40 | 2.80 | 2.80 | 2.80 | 1.68 | 1.96 | 1.96 | 2.24 | 2.46 | 2.46 |

* No information available.

handling. According to the estimates given by one company, the costs of milling and hand-picking amount to about 2.5 to 3 cents per pound. The cost of hand-picking alone is estimated at approximately 1 cent per pound.

*Method of selling and price determination*

Most of the large companies sell the peas thru their own agents. Early in the summer, representatives of the seed companies meet with the canners and other buyers to ascertain approximately what the demand will be for the next year. The seed-company agents then go directly to canning factories, market gardeners, jobbers, and other prospective buyers, and contract as much of the next year's crop as is possible at the prices decided upon. The agents then return to the producing areas, meet with growers, and negotiate contracts with them. A house-to-house canvass is made of all growers for the signing of the contracts. This is necessary to settle questions of acreage, varieties, and various details pertaining to the growing and harvesting, as well as to agree on the price to be paid.

*Margins and transportation cost*

No data are available on the margins necessary in handling the seed. The manager of one company states that the margins are relatively small, probably not to exceed one-tenth of a cent per pound between the total cost and the sale price. Only those companies that handle a large amount of seed can come out at the end of the year with any profit. This manager states further that the hazards are great in the seed-pea game, competition being strong between companies, and that many seed companies have failed.

The cost of transportation on seed peas from Idaho to New York in 1925 was $1.05 per hundredweight. If to this cost is added the approximate cost of milling and hand-picking, and the estimated margin for handling, it appears that the seed peas are usually offered to the New York growers at a price approximately double the average prices paid to the Idaho growers.

*Prices of seed peas in Idaho and New York*

In table 71 are given the prices paid to Idaho growers by one of the large seed companies, from 1912 to 1926, and in table 72 are given the prices paid by a New York canning company for seed during the same years. The canning company charged this seed to its growers at cost.

The prices paid to the growers of the seed and the prices paid by the users of the seed parallel each other fairly closely. The gross margin between the two series of prices

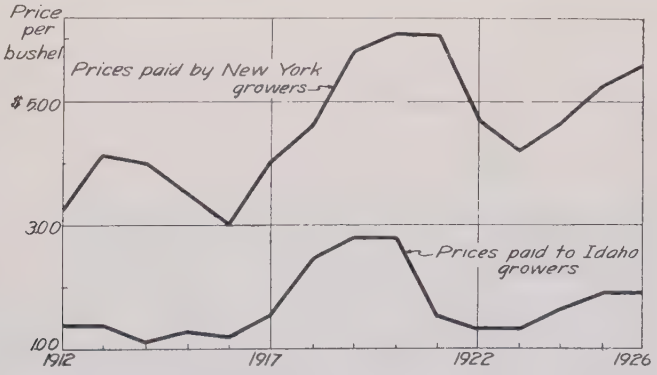



FIGURE 34. PRICES PAID TO IDAHO GROWERS FOR SEED OF ALASKA AND ADMIRAL VARIETIES OF CANNING-FACTORY PEAS, AND PRICES PAID BY NEW YORK GROWERS TO A SEED COMPANY FOR THE PEA SEED, 1912 TO 1926

(Data from a large Idaho seed company and a New York canning factory)

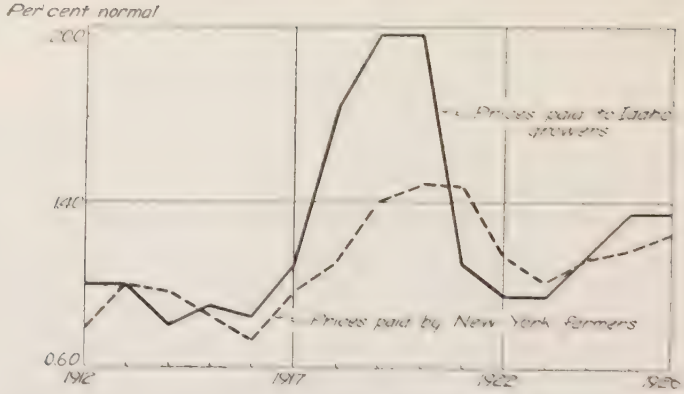



FIGURE 35. RELATION OF THE PRICES PAID TO IDAHO GROWERS FOR SEED OF ALASKA AND ADMIRAL VARIETIES OF CANNING-FACTORY PEAS, TO THE PRICES PAID BY NEW YORK FARMERS FOR THE SEED, 1912 TO 1926

(1913 = 100)

(Data from an Idaho seed company and a New York canning factory)

varies from year to year. During the World War, when freight rates and other costs of handling were increased, prices rose about 100 per cent. In 1921 and 1922, prices paid to the growers of seed dropped to their pre-war level. But the prices paid by New York farmers for the seed did not get down to the pre-war price, and have consistently maintained a new margin level since the war because freight rates and selling costs were not correspondingly reduced.

TABLE 72. PRICES CHARGED BY ONE COMPANY TO GROWERS OF CANNING-FACTORY PEAS FOR SEED, 1912 TO 1926*

| Year | Alaska | Admiral | Average |
|---|---|---|---|
| | Price per bushel | | |
| 1912 | $3.25 | $3.25 | $3.25 |
| 1913 | 4.00 | 4.25 | 4.12 |
| 1914 | 4.00 | 4.00 | 4.00 |
| 1915 | 3.50 | 3.50 | 3.50 |
| 1916 | 3.00 | 3.00 | 3.00 |
| 1917 | 4.00 | 4.00 | 4.00 |
| 1918 | | | 4.01 |
| 1919 | 6.00 | 5.60 | 5.80 |
| 1920 | 6.00 | 6.16 | 6.08 |
| 1921 | 6.00 | 6.10 | 6.05 |
| 1922 | 4.68 | 4.68 | 4.68 |
| 1923 | 4.50 | 3.92 | 4.21 |
| 1924 | 4.80 | 4.48 | 4.64 |
| 1925 | 5.55 | 4.94 | 5.25 |
| 1926 | 5.60 | 5.46 | 5.53 |
| Average | $4.63 | $4.52 | $4.58 |

* Data supplied by a canning company in western New York.

The relative prices paid to Idaho growers for market-pea seed and for canning-factory-pea seed, are shown in figure 36. During the fifteen years covered by this chart, the prices for the market-pea varieties have been higher than those for the

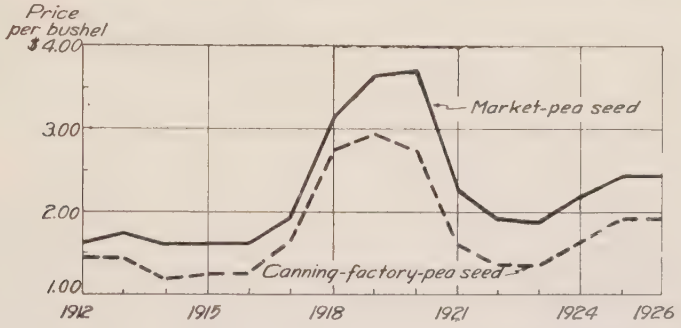



FIGURE 36. RELATION OF PRICES PAID TO IDAHO GROWERS FOR MARKET-PEA SEED AND FOR CANNING-FACTORY-PEA SEED, 1912 TO 1926

canning-factory varieties. Since 1921 the spread between the two series has been considerably wider than it was before the World War. This is probably due to the greater increase in the market-pea acreage as compared with the canning-factory-pea acreage. The greater demand for the market-pea seed has necessitated relatively higher prices to seed growers in order that adequate quantities of the market-pea seed would be produced.

This situation is one of the causes for the great increase in acreage of seed peas in Idaho since 1921 — from 20,000 acres in that year, to 76,000 acres in 1926 (table 73). Prices paid to Idaho growers in 1912 were from 2.5 to 3.25 cents per pound for market varieties, and from 2.5 to 3 cents for canning varieties. In 1926 they were from 3.5 to 5 cents for market varieties and from 3.25 to 4 cents for canning varieties. Per bushel, the market-pea seed averaged $1.63 and the canning-pea seed $1.45 in 1912, while in 1926 the market varieties averaged $2.44 per bushel as compared with $1.92 per bushel for the canning varieties (table 71).

TABLE 73. ACREAGE, PRODUCTION, AND FARM VALUE OF SEED PEAS IN IDAHO, 1921 TO 1926

| Year | Number of acres of peas | Total bushels produced | Yield per acre, in bushels | Total value | Value per acre | Value per bushel |
|---|---|---|---|---|---|---|
| 1921 | 20,000 | 380,000 | 19.0 | $1,007,000 | $50.35 | $2.65 |
| 1922 | 28,000 | 504,000 | 18.0 | 932,000 | 33.30 | 1.85 |
| 1923 | 47,000 | 1,128,000 | 24.0 | 2,087,000 | 44.40 | 1.85 |
| 1924 | 57,000 | 855,000 | 15.0 | 1,582,000 | 27.75 | 1.85 |
| 1925 | 72,000 | 1,656,000 | 23.0 | 3,146,000 | 43.70 | 1.90 |
| 1926* | 76,000 | 1,520,000 | 20.0 | 2,888,000 | 38.00 | 1.90 |
| Average | ..... | ..... | 20.15 | ..... | $38.81 | ..... |

* Estimates from July crop report, United States Department of Agriculture.

With an average yield of 20.15 bushels per acre for the six years 1921 to 1926, the Idaho grower received an average gross return of $38.81 per acre.[10]

[10] Idaho crop report, July, 1926, Division of Crop and Livestock Estimates, United States Department of Agriculture.

*Disadvantages of home-grown seed in New York*

Seed-pea growing in North America began in New York and Canada, but has gradually moved westward. At the present time a large part of the seed crop is produced in Idaho, Montana, Washington, Wisconsin, and California. Some pea seed is still produced in New York, but the industry in this State is at a disadvantage. In humid regions there is always danger of wet weather during the time when the peas are maturing, and this makes it almost impossible to properly cure the vines. Furthermore,

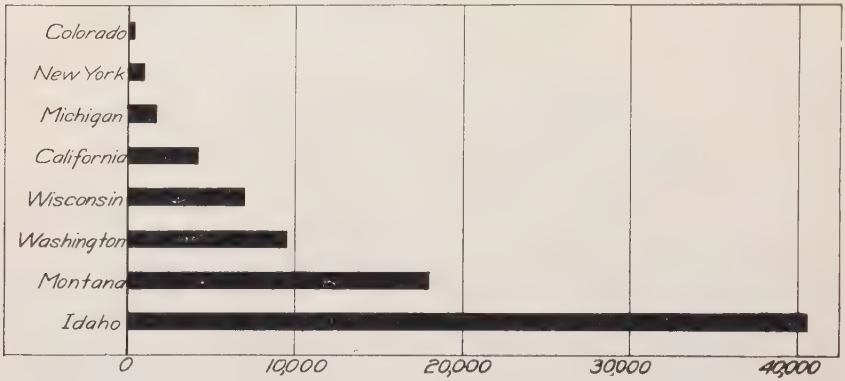



FIGURE 37. ACREAGE OF SEED PEAS IN THE UNITED STATES, 1923

(From *Weather, Crops, and Markets*, United States Department of Agriculture, August 25, 1923)

field diseases are more serious in humid than in the drier regions. The quality of pea seed grown in New York generally is inferior to that produced in the important seed-growing States.

In addition to the points mentioned above, the production of peas for market and for canning is more profitable than the growing of seed, even with a yield as high as is obtained in Idaho. With average net returns per acre, for market peas, of $46.57 in Erie County and $86.28 in the Madison area in 1925, as compared with an average gross return of $38.81 per acre in the Idaho seed-pea area for the six years 1921 to 1926, it is not difficult to understand why most New York pea growers do not raise their own seed.

Of course the gross return per acre would probably be higher than $38.81 in New York, provided the yield were as high as in Idaho, because of the difference in the price per bushel for the seed peas in the two States. But even if the $38.81 per acre were doubled under New York conditions, the Madison growers would still get a higher net return, after all costs were paid, from green peas, than the gross returns from seed-pea production would total.

## WHOLESALE PRICES OF GREEN PEAS FOR TABLE USE IN NEW YORK CITY

The New York market is supplied with green peas for table use continuously thruout the year. From the middle of November until the middle of April, the supply comes almost exclusively from Florida; from the middle of April until the middle of May, from the Carolinas; from the middle of May until the middle of June, from Virginia, Maryland, and Delaware; from the middle of June until the first of July, from New Jersey, Long Island, and Erie County, New York; from the first of July until the middle of September, from Madison and Chenango Counties, New York; and from the last of September until the middle of November, from the late crop produced in Virginia. This completes the cycle of pea marketing thruout the year. New York grows from one-eighth to one-fourth of the green peas produced for table use in the United States.

The price at which peas can be sold depends not only upon the supply of peas in the market, but also upon the supply of all other green vegetables. The price of peas has certain seasonal tendencies. The price received for Florida peas is normally high from November until the middle of March, with increases at Thanksgiving, Christmas, the

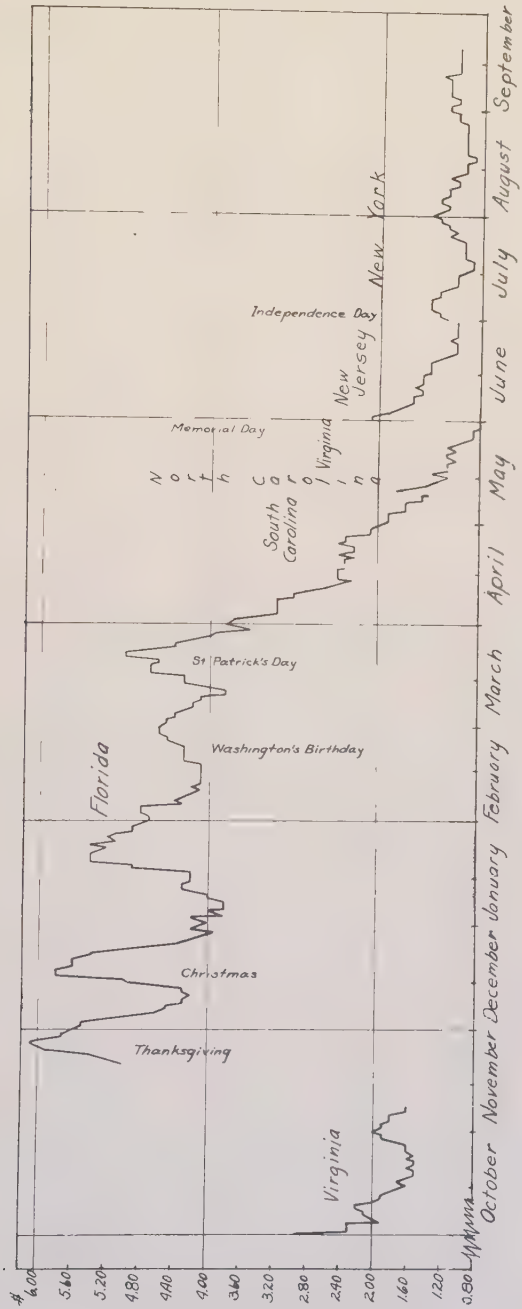



FIGURE 38. AVERAGE PRICE OF MARKET PEAS AT NEW YORK, 1910 TO 1914
(Converted to a uniform basis of approximately 32 quarts)

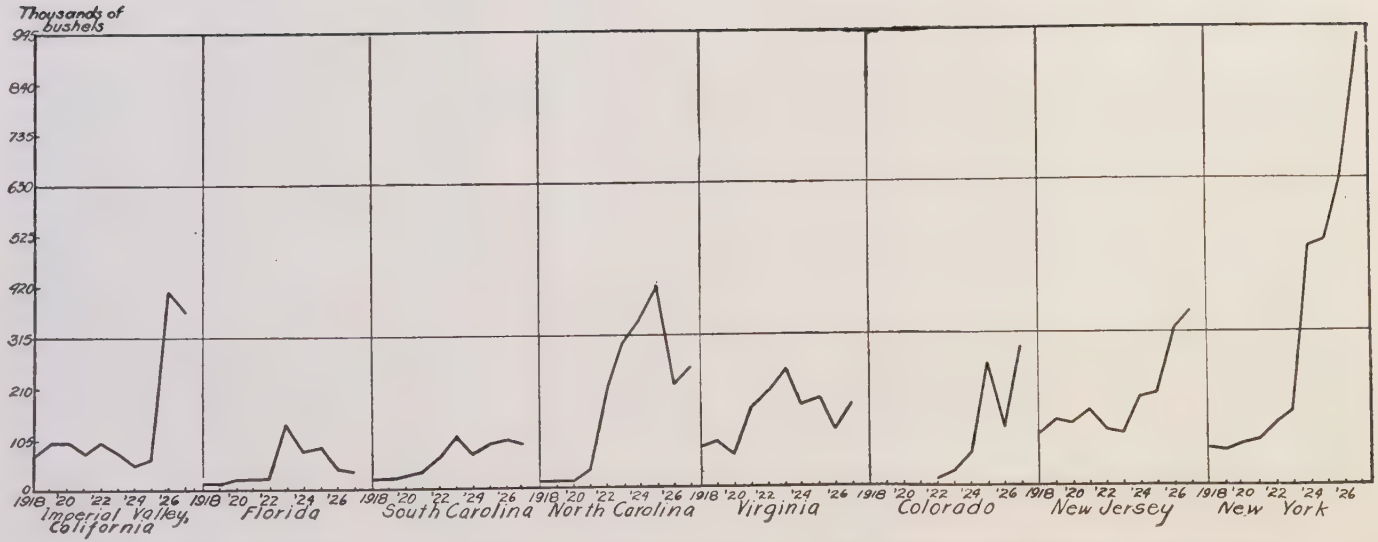



FIGURE 39. PRODUCTION OF GREEN PEAS IN STATES CONTRIBUTING TO THE NEW YORK CITY MARKET, 1918 TO 1927

last of January, and Easter. The price declines as the South Carolina and North Carolina crops are coming on the market, reaching a low point in May and June for Virginia peas. The price of state peas averages slightly higher than that of Virginia peas. State peas have two distinct periods of low prices and three periods of relatively high prices. The high-priced periods are the last of June and the first of July, the first week in August, and the first or the second week in September. The crop from the Roanoke section of Virginia reaches a market of rising prices during the last week in September and the first half of October. The price continues to increase as the Florida crop comes on the market, culminating in very high prices at Thanksgiving.

One characteristic of the price changes is that, as the harvesting moves northward, the crop produced nearer the market brings higher prices than the crop produced farther away. On the basis of quality, it is to be expected that the crop from a nearer area will sell for more than the remainder of the crop from the preceding area.

TABLE 74. AVERAGE DAILY WHOLESALE PRICES OF FLORIDA PEAS IN NEW YORK CITY, PER 28-QUART BASKET
(H = holiday, S = Sunday)

| Month and day | Five-year average, 1910–1914* | 1908 | 1909 | 1910 | 1911 | 1912 | 1913‡ | 1914* | 1915‡ | 1916‡ | 1917‡ | 1918 | 1919 | 1920 | 1921‡ | 1922 | 1923 | 1924 | 1925‡ | 1926 | 1927 | 1928 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| January | | H | H | H | S | H | H | H | H | H | H | H | H | H | H | S | H | H | H | H | H | S |
| 1 | | $3 52 | $2 50 | $3 25 | S | H | $2 50 | $2 62 | $4 00 | $3 25 | S | $4 12 | $3 00 | $4 50 | $3 50 | S | H | $3 75 | $2 69* | $4 19 | $3 38 | S | H |
| 2 | | 3 72 | 2 50 | S | $4 50 | $5 00 | 2 50 | 2 62 | 4 00 | S | $3 75 | 3 75 | 3 00 | 4 50 | 3 50 | $2 88 | $1 00 | 3 75 | 2 62* | 4 19 | S | $2 50 | $4 00 |
| 3 | | 3 37 | 2 50 | S | 3 25 | 4 50 | 3 25 | 2 50 | 2 62 | S | 2 75 | 3 50 | 3 75 | 3 00 | 4 50 | S | | 3 75 | 2 69* | S | 3 75 | 2 75 | 3 75 |
| 4 | | 3 37 | 2 50 | 3 25 | 4 50 | 3 25 | 2 50 | 2 62 | S | 2 75 | 3 50 | 3 75 | 3 00 | S | 3 50 | 2 88 | 4 00 | 3 75 | 2 69* | 4 00 | 3 88 | 3 25 | 5 25 |
| 5 | | 3 52 | S | 3 25 | 4 50 | 4 00 | 2 50 | S | 4 00 | 2 75 | 3 50 | 3 75 | 3 00 | S | 3 50 | 2 88 | 4 00 | 3 50 | S | 4 00 | 3 88 | 3 25 | 4 75 |
| 6 | | 3 37 | 2 50 | 3 25 | 4 50 | 3 50 | 2 50 | 2 62 | 3 75 | 2 75 | 3 50 | 3 75 | S | 4 50 | 3 50 | 2 88 | 4 00 | S | 2 69* | 4 12 | 4 12 | 4 25 | 4 75 |
| 7 | | 3 37 | 2 25 | 3 25 | 4 50 | 3 50 | S | 2 62 | 3 75 | 2 75 | 3 50 | S | ... | 4 50 | 3 50 | 2 88 | 4 00 | S | 2 81* | 4 12 | 4 38 | 4 25 | S |
| 8 | | 3 35 | 2 00 | 3 25 | 4 50 | S | 2 50 | 2 62 | 3 75 | 2 75 | S | 2 62 | ... | 5 00 | 3 50 | 2 88 | S | 3 50 | 2 81* | 4 12 | 4 50 | S | ..... |
| 9 | | 3 48 | 2 00 | 3 25 | S | 3 25 | 2 50 | 2 88 | 3 75 | 2 75 | S | 2 62 | ... | 5 00 | 3 50 | S | 4 00 | 3 50 | 2 81* | 4 12 | S | 4 50 | 5.50 |
| 10 | | 3 53 | 1 75 | S | 5 50 | 3 00 | 2 50 | 2 88 | 3 75 | S | 3 38 | 3 62 | 3 50 | 5 00 | 3 50 | 2 88 | 4 00 | 3 50 | 2 69* | 4 12 | 4 50 | 5.50 | 5.50 |
| 11 | | 3 68 | 1 75 | 3 25 | 5 50 | 4 00 | 2 25 | 2 88 | S | 2 88 | 3 38 | 3 62 | 4 00 | 6 00 | S | 2 88 | 4 50 | 4 00 | 2 69* | S | 4 25 | 4 25 | 5.50 |
| 12 | | 3 73 | S | 3 25 | 5 50 | 3 75 | 2 75 | S | 3 75 | 2 88 | 3 38 | 4 00 | 4 00 | S | 3 50 | 2 88 | 4 50 | 4 00 | 3 62* | 4 62 | 4 25 | 5 00 | 5.50 |
| 13 | | 3 73 | 1 75 | 3 25 | 5 50 | 3 75 | 2 75 | 2 88 | 3 75 | 2 88 | 3 38 | 4 00 | S | 6 00 | 3 00 | 2 88 | 4 50 | 3 50 | S | 5 19 | 6 25 | 5 25 | 5.50 |
| 14 | | 3 68 | 1 75 | 3 50 | 5 50 | 3 50 | S | 2 88 | 3 75 | 2 88 | 3 12 | S | 4 00 | 6 00 | 3 00 | 2 88 | 4 50 | S | 4 50* | 5 00 | 6 25 | 5 50 | 5.50 |
| 15 | | 3 66 | 1 75 | 3 50§ | 5 50 | S | 2 75 | 2 88 | 3 75 | 2 88 | 3 12 | 4 00 | 4 00 | 6 00 | 3 00 | 2 88 | S | 4 25 | 4.44* | 5 00 | 6 00 | 6.00 | S |
| 16 | | 3 65 | 1 75 | 3 50§ | S | 3 38§ | 2 75 | 2 88 | 3 75 | 3 00 | S | 3 25 | 4 00 | 6 00 | 3 00 | S | 5.00 | 4 25 | 6 12* | 5 25 | S | 5 00 | 5.12 |
| 17 | | 3 67 | 2 00 | S | 5 50 | 3 12§ | 2 50 | 3 50 | 3 75 | S | 2 62 | 3 25 | 4 00 | 6 00 | 3 00 | S | 5 00 | 4 25 | 6 12* | S | 5 00 | 6.00 | 6.00 |
| 18 | | 4 27 | 2 00 | 3 50§ | 2 00 | 3 12§ | 2 50 | 3 50 | S | 3 00 | 2 62 | 3 25 | 3 50 | 6 00 | S | | 5 75 | 4 25 | 6 50* | S | 6 00 | 5 00 | 5.00 |
| 19 | | 4 27 | S | 3 50§ | 2 00 | 3 12§ | 2 50 | S | 4 75 | 3 00 | 2 38 | 3 25 | 3 50 | S | | | 5 75 | 4 75 | 9 00 | 6 12 | 5 00 | 5 50 | 5.50 |
| 20 | | 4 75 | 2 25 | 3 50§ | 2 00 | 3 12§ | S | 3 38§ | 3 50 | 4 75 | 3 00 | 2 38 | 3 25 | S | | | 5 75 | 4 75 | S | 6 00 | ... | 5 75 | ..... |
| 21 | | 4 75 | 2 25 | 3 50§ | 2 00 | 3 12§ | S | S | 3 50 | 4 75 | 3 00 | 2 38 | S | 3 50 | | 5 50 | 5 75 | S | 11 00 | 5 50 | 4 50 | 5 75 | ..... |
| 22 | | 4 70 | 2 25 | 3 50§ | 2 00 | | 4 38§ | S | 3 25 | 4 75 | 3 00 | 2 12 | 3 25 | 3 50 | | 5 50 | S | 4 75 | 11 00 | 5 12 | 3 75 | 5 75 | S |
| 23 | | 4 65 | 2 25 | 3 50§ | S | 3 12§ | 4 38§ | 3 25 | 4 75 | 3 00 | 2 12 | 3 25 | 3 50 | | | | 5 75 | 4 75 | 6 25 | 4 94 | 3 50 | S | 4 50 |
| 24 | | 4 57 | 2 50 | S | 7 50 | 3 12§ | 4 38§ | 3 62 | 4 25 | S | 1 88 | 2 50 | 3 50 | | | 5 50 | 5 75 | 4 75 | 6 25 | 4 94 | S | 4 50 | 4.88 |
| 25 | | 4 76 | 2 50 | 3 50§ | 7 00 | 2 62§ | 6 00 | 3 62 | S | 2 88 | 1 88 | 2 50 | 3 50 | 8 00 | S | 5 50 | 6 00 | 4 75 | 6 00 | S | 3 00 | 4 00 | ..... |
| 26 | | 4 50 | S | 3 50 | 6 00 | 2 62§ | 6 00 | S | 4 25 | 2 50 | 1 88 | 3 00 | 3 50 | S | | 5 50 | 6 00 | 4 25 | 5 50 | 4 06 | 2 88 | 4 00 | 4.50 |
| 27 | | 4 52 | 3 00 | 3 25 | 6 00 | 2 75§ | 6 00 | 3 62 | 4 25 | 2 50 | 1 88 | 3 00 | S | 7 50 | | 5 50 | 6 00 | 4 50 | S | 3 94 | 2 88 | 4 00 | 4.62 |
| 28 | | 4 47 | 3 00 | 3 25 | 6 00 | 2 75§ | S | 3 62 | 4 25 | 2 50 | 1 88 | S | 3 50 | 7 50 | | 5 50 | 6 00 | | S | 5 12§ | 3 94 | 2 88 | ..... |
| 29 | | 4 32 | 3 00 | 3 25 | 6 00 | S | 5 50 | 3 62 | 3 75 | 2 50 | 1 88 | 3 00 | 3 50 | 7 50 | | 5 50 | S | 3 25 | 5 50§ | 4 25 | 3 00 | ... | S |
| 30 | | 4 30 | 3 00 | 3 50 | S | 2 75§ | 6 00 | 3 62 | 3 50 | 2 50 | S | 3 00 | ..... | 6 00 | | | 6 00 | 3 25 | 4 81§ | 4 75 | S | ..... | 4.75 |
| 31 | | 4 23 | 3 00 | S | 5 25 | 2 50§ | 6 00 | 3 88 | 3 50 | S | 1 88 | 3 00 | ... | 6 00 | | 5 50 | 6 00 | 3 25 | 4 88§ | 4 75 | S | .... | 3.00 |
| February | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | | 4 14 | 3 00 | 3 50 | 5 25§ | 2 38§ | 6 00 | 3 88 | S | 2 50 | 2 12 | 3 00 | ... | 6 00 | S | 5 50 | 6 75 | 3 25 | 4 88§ | S | ..... | ..... | 3.50 |
| 2 | | 4 08 | S | 3 00 | 5 25§ | 2 38§ | 6 00 | S | 2 88 | 2 50 | 2 12 | 3 00 | ... | S | | 5 50 | 6 75 | 3 00 | 5 00§ | 4 50 | ... | ..... | 3.50 |
| 3 | | 4 16 | 3 00 | 3 00 | 5 25§ | 2 81§ | 6 00 | 3 88 | 2 88 | 2 50 | 2 12 | 3 00 | S | 6 00 | | 6 00 | 6 75 | 3 00 | S | 4 50 | ... | ..... | 4.00 |
| 4 | | 4 20 | 3 25 | 3 00 | 5 25§ | 2 81§ | S | 3 62 | 3 31 | 2 50 | 2 38 | S | ... | 6 00 | | 6 56 | 6 75 | S | 6 00§ | 4 50 | ... | ..... | 3.75 |
| 5 | | 4 16 | 3 12 | 3 00 | 5 25§ | S | 6 00 | 3 62 | 3 12 | 2 50 | 2 38 | 3 88 | ... | 6 00 | | 6 50 | S | 3 00 | 5 75§ | 4 50 | ... | ..... | S |
| 6 | | 3 76 | 3 12 | 3 00 | S | 2 81§ | 4 00 | 3 62 | 3 12 | 2 50 | S | 4 38 | ... | 6 00 | | S | 6 75 | 2 75 | 6 38§ | 4 12 | 3 25 | ..... | 3 25 |
| 7 | | 3 84 | 3 25 | S | 5 25§ | 2 81§ | 4 00 | 4 00 | 3 12 | S | 2 38 | 4 38 | ... | 6 00 | | 6 75 | 6 50 | 2 75 | 6 38§ | 4 19 | S | ..... | 3 50 |
| 8 | | 3 77 | 3 25 | 3 00 | 5 25§ | 2 75§ | 4 00 | 4 00 | S | 2 50 | 2 38 | 4 38 | ... | 5 00 | S | 6 75 | 6 25 | 2 75 | 6 25§ | S | 3 25 | 2 62 | 3 50 |
| 9 | | 3 66 | S | 3 00 | 5 25§ | 2 69§ | 4 00 | S | 2 62 | 2 75 | 2 00 | 4 75 | ... | S | | 6 75 | 6 12 | 2 75 | 5 88§ | 4 19 | 3 00 | 3 00 | 3.50 |
| 10 | | 3 55 | 3 25 | 3 00 | 5 25§ | 2 38§ | 4 00 | 3 50 | 2 62 | 2 75 | 2 00 | 4 75 | S | 5 00 | 3 75 | 6 75 | 6 12 | 2 75 | S | 4 19 | 3 00 | ..... | ..... |
| 11 | | 3 63 | 3 25 | 3 00 | 5 25§ | 2 38§ | S | 3 50 | 3 00 | 2 88 | 2 00 | S | ... | 6 00 | 4 50 | 6 75 | 6 50 | S | 6 38§ | 4 19 | 3 00 | ..... | 3.38 |
| 12 | | | H | H | H | S | H | H | H | H | H | H | H | H | H | H | S | H | H | H | H | ..... | S |
| 13 | | 3 60 | 3 25 | 3 00 | S | H | 4 00 | 3 50 | 3 00 | 4 00 | S | 4 75 | 6 00 | 5 50 | 4 50 | S | H | 2 75 | 6 38§ | 4.56 | 2 75 | ..... | H |

| | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14 | 3.57 | 3.25 | S | 5.25‡ | 2.12‡ | 4.00 | 3.50 | 3.00 | S | 2.00 | 4.75 | 6.00 | 5.50 | 4.50 | 5.00 | 6 50 | 3 00 | 6.50‡ | 4.62 | S | ..... | 3.25 |
| 15 | 3.60 | 3 25 | 3.00 | 5.25‡ | 2.12‡ | 4.00 | 3.62 | S | 3.25 | 2 00 | 4.75 | 5.00 | 5.50 | S | 5.00 | 6 50 | 3.00 | 6.50‡ | S | 2.75 | 1.75 | 3.00 |
| 16 | 3.60 | S | 3.00 | 5.25‡ | 2.12‡ | 4.00 | S | 3.00 | 3.25 | 2 25 | 4.75 | 5.00 | S | 4.50 | 4 25 | 6 50 | 2.75 | 6 50‡ | 4 25 | 2.75 | 1.88 | ..... |
| 17 | 3.60 | 3.00 | 3.00 | 5.25‡ | 2.12‡ | 4 00 | 3.62 | 3.00 | 3.25 | 2 25 | 6.00 | S | ..... | 4.50 | 3.88 | 6 50 | 2 75 | S | 4 00 | 2.75 | 2.00 | 2.38 |
| 18 | 3.60 | 3.50 | 3.00 | 4.50‡ | 2.12‡ | S | 3.62 | 2 75 | 3 25 | 2.38 | S | 5.00 | ..... | 4.50 | 3 88 | 6 50 | S | 6.12‡ | 4.38 | 3.00 | 1.75 | ..... |
| 19 | 3.80 | 3.50 | 3.00 | 4.50‡ | S | 6.00 | 3 62 | 2 75 | 3 25 | 2.38 | ..... | 5.00 | ..... | 4.50 | 3 88 | S | 2.50 | 6.00‡ | 3.12 | 3.00 | 2.25 | S |
| 20 | 3.77 | 3 50 | 3.00 | S | 2.12‡ | 6.00 | 3 62 | 2 75 | 3.75 | S | ..... | 5.00 | ..... | 4.50 | S | 6.50 | 2 50 | 5.38‡ | 3.25 | 3.00 | S | 1.75 |
| 21 | 3.76 | 3 50 | S | 4.25‡ | 2.12‡ | 6.00 | 3 62 | 2 75 | S | 2 50 | ..... | 5.00 | ..... | 4.50 | 4.00 | 6 50 | 2 50 | 5.38‡ | 3.25 | S | 1.88 | 2.00 |
| 22 | ..... | H | H | H | H | H | H | H | S | H | H | H | H | S | H | H | H | H | S | H | H | H |
| 23 | 3.75 | S | 5.00 | 4 25‡ | 2.12‡ | 6.00 | S | H | 3.12 | 2 50 | ..... | 5 00 | S | H | 4 00 | 6 50 | 2.62 | 5.25‡ | H | 3.00 | 1.88 | 2.00 |
| 24 | 3.87 | 3.50 | 7.50 | 4.25‡ | 2.75‡ | 6 00 | 3 62 | 2.75 | 3 12 | 2 50 | ..... | S | 4.50 | 4 50 | 4.00 | 8 00 | 2 62 | S | 3.38 | 3.00 | 1.88 | 2.00 |
| 25 | 3.97 | 3 25 | 7 50 | 4 25‡ | 3.25‡ | S | 3 62 | 2 75 | 3.12 | 2 50 | S | 4.50 | 4.50 | 4.50 | 4.00 | 8.00 | S | 4.88‡ | 4.38 | 3.00 | 1.75 | 2.00 |
| 26 | 3.97 | 3 25 | 8 00 | 4 25‡ | S | 6.00 | 3 62 | 2 75 | 3.12 | 2 50 | 4.25 | 4.00 | 4.00 | 4 50 | 4.00 | S | 3 00 | 4.62‡ | 4.62 | 3.00 | 1.62 | S |
| 27 | 4.07 | 3.25 | 7.00 | S | 3 25‡ | 6 00 | 3 62 | 3 25 | 3 12 | S | 3.50 | 4.00 | 4.00 | 4 50 | S | 7 50 | 3 00 | 4.38‡ | 4.62 | 2 75 | S | 2.50 |
| 28 | 4.07 | 3 25 | S | 4.25‡ | 3 25‡ | 6 00 | 3 62 | 3 25 | S | 2 50 | 3.50 | 4.00 | 4.00 | 4.50 | 4 00 | 8 00 | 3 00 | 4.25‡ | 5.62 | S | 1.62 | 1.50 |
| 29 | ..... | 3 25 | ..... | ..... | ..... | 6.00 | ..... | ..... | ..... | 2 50 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 4.38‡ | ..... | ..... | ..... | ..... |
| March | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 4.02 | S | 7.00 | 4.00‡ | 3 25‡ | 6 00 | 3.62 | S | 3 12 | 4.75 | 3.00 | 4.00 | 3.50 | 4.50 | 4 12 | 8 00 | 3 25 | 4.38‡ | S | 2.75 | 1.62 | ..... |
| 2 | 3.97 | 3 75 | 5 00 | 4 00‡ | 3 00‡ | 6 00 | S | 3 25 | 3 75 | 4.75 | 3.00 | 3 50 | S | ..... | 4.12 | 8 00 | 4.00 | S | 5.50 | 2.75 | 1.75 | ..... |
| 3 | 3.95 | 3.75 | 4 00 | 4 00‡ | 2 88‡ | S | 3 62 | 3 25 | 3 75 | 4.75 | 3.00 | S | 4.50 | ..... | 4 12 | 8 00 | 4 00 | 4 62‡ | 4.88 | 2.75 | 1.75 | ..... |
| 4 | 3.85 | 3.75 | 4 00 | 3.50 | 2 88‡ | 6.00 | 3 62 | 3 25 | 4.00 | 4.75 | S | 4.00 | 5.00 | ..... | 4.75 | 8 00 | S | 4.62‡ | 4.19 | ..... | 1.88 | ..... |
| 5 | 3.85 | 3 75 | 4 00 | 3 50 | S | 6.00 | 3 62 | 3 25 | 4 00 | S | 3.00 | 4.00 | 5.00 | 5.50 | 4 75 | S | 4 12 | 4 62‡ | 4.06 | ..... | ..... | ..... |
| 6 | 3.75 | 3 75 | 4 00 | S | 2 88‡ | 5.50 | 3 62 | 3 25 | 4 00 | 4 88 | ..... | 4.00 | 5.00 | 5.50 | S | 8 00 | 4 38 | 4 62‡ | 3.25 | ..... | S | ..... |
| 7 | 3.65 | 3.75 | S | 3.50 | 2 88‡ | 5 00 | 3 62 | 3 25 | S | 5 38 | ..... | 4.00 | ..... | S | 5.25 | 8 00 | 4 50 | 4.38‡ | 2.75 | S | 2.00 | ..... |
| 8 | 3.66 | S | 4 00 | 3.50 | 2 88‡ | 5.00 | 3 62 | S | 4 00 | 5 38 | ..... | 4 00 | 5.00 | 5.50 | 5 25 | 8 50 | 4 75 | 4 38‡ | S | 3.25 | 2.12 | ..... |
| 9 | 3.58 | 4 50 | 4 00 | 3.50 | 2 88‡ | 4.50 | S | 3 38 | 4 00 | 5 38 | ..... | 4 00 | S | 5.50 | 5 25 | 8 50 | 4 75 | S | 3.19 | 3.00 | 2.12 | ..... |
| 10 | 3.60 | 4 25† | 4 00 | 3.50 | 3 25‡ | S | 3 62 | 3 38 | 4.00 | 4 88 | ..... | S | 5.50 | 5.50 | 5 25 | 7 50 | 4 75 | 4 38‡ | 3.19 | 3.00 | 2.38 | ..... |
| 11 | 3.35 | 4 38† | 4 00 | 2 50 | 3 25‡ | 4 00 | 3 62 | 3 38 | 4.00 | 4 88 | S | 4.00 | 5.50 | 5.75 | 5 25 | 7 50 | S | 4.06‡ | 3.12 | 2 62 | 2.50 | ..... |
| 12 | 3.35 | 4 38† | 4.00 | 2 50 | S | 4.00 | 3 62 | 3 38 | 5 00 | S | ..... | 4.00 | 5.50 | 5.75 | 5 25 | S | 4 25 | 4 50‡ | 3.31 | 2 62 | 2.50 | 2.50 |
| 13 | 3.62 | 4.38† | 4.00 | S | 3 25‡ | 3 50 | 3 62 | 5 00 | 5 00 | 4 88 | 4.00 | 4.00 | 5.50 | 5.75 | S | 7.50 | 4.75 | 4 88‡ | 3.19 | 2.62 | S | ..... |
| 14 | 3.75 | 4 38† | S | 3 00 | 3 62‡ | 3 50 | 3 62 | 5 00 | S | 4 88 | 3.00 | 3.50 | 6.00 | S | 4.50 | 7 75 | 4 75 | 5 00‡ | 3.12 | S | 2.75 | ..... |
| 15 | 3.75 | S | 4 00 | 3 00 | 3 62‡ | 3.50 | 3.62 | S | 4.75 | 4 88 | 3.00 | 3.50 | 6.00 | 4.50 | 4 50 | 7 50 | 5.00 | 5.00‡ | S | 3 00 | 2.75 | 3.00 |
| 16 | 3.74 | 4 38† | 4 00 | 3 00 | 3 62‡ | 3 50 | S | 5 00 | 4 50 | 4 88 | 3.00 | 3.50 | S | 4.00 | 4.50 | 7.00 | 5 00 | S | 2.94 | 3 25 | 2.88 | ..... |
| 17 | 4.10 | 4.38† | 3 50‡ | 3 00 | 5 25‡ | S | 3 50 | 5 00 | 4.25 | 4 88 | 3.00 | S | 5.50 | 4.00 | 3.50 | 6 00 | 5.00 | 5.38‡ | 2.94 | 2 75 | 2.88 | ..... |
| 18 | 4.15 | 3.75† | 3 50‡ | 3 00 | 5 25‡ | 4 00 | 3 50 | 5 00 | 4 25 | 4 88 | S | 3.25‡ | 5.50 | 4.00 | 4.25 | 6 00 | S | 5 12‡ | 2.75 | 3 00 | 2.75 | ..... |
| 19 | 4.15 | 3.75† | 4 50‡ | 3 00 | S | 4.00 | 3.50 | 5.00 | 4 25 | S | 3.00 | 3.25‡ | 5.00 | 4.00 | 4.25 | S | 4 00 | 4.75‡ | ..... | 3 00 | 2.88 | ..... |
| 20 | 4.05 | 2 88† | 4 50‡ | S | 5 25‡ | 3.50 | 3 50 | 5 00 | 4.25 | 4 62 | 3.00 | 2.75‡ | 5.00 | 4.00 | S | 6 00 | 3 75 | 4.38‡ | ..... | 3.00 | S | 2.88 |
| 21 | 4.00 | 2 88† | S | 3.00 | 5 00‡ | 3.50 | 3 50 | 5 00 | S | 4 62 | 3.00 | 2.75‡ | 4.50 | S | 3 38 | 6 00 | 3 75 | 4.12‡ | ..... | S | 2.75 | 3.25 |
| 22 | 4.40 | S | 4 50‡ | 3 00 | 6 50 | 4.00 | 3 50 | S | 4 12 | 4 00 | 2.50 | 2.75‡ | 4.50 | 4.00 | 3.38 | 5 88 | 3 75 | 4.12‡ | ..... | 3.00 | 3.00 | 2.75 |
| 23 | 4.40 | 2.75† | 4 50‡ | 3 00 | 6 50 | 4 00 | S | 5 00 | 3 75 | 4 00 | 2.50 | 2.75‡ | S | 4.00 | 3.38 | 5 88 | 3.25 | S | ..... | 3.00 | 3.25 | 2.62 |
| 24 | 4.03 | 2 38† | 4 50‡ | 3 00 | 6 50 | S | 3 50 | 3 38 | 4 00 | 4 00 | 2.50 | S | 4.00 | 4.00 | 3.38 | 5 88 | 3.25 | 4 06‡ | ..... | ..... | 3.25 | ..... |
| 25 | 3.85 | 2 25† | 4 12‡ | 3 00 | 6 50 | 3 50 | 3 00 | 3 25 | 4 38 | 4 00 | S | 2.75‡ | ..... | 3.50 | 3 38 | 6 25 | S | 4 06‡ | ..... | 4 50 | 3.25 | ..... |
| 26 | 3.85 | 2 06† | 3 25‡ | 3 00 | S | 4 00 | 2 75 | 3 25 | 4 38 | S | 2.50 | 2.75‡ | 4.00 | 3.50 | 3 00 | S | 2 50 | 3 94‡ | ..... | 4 50 | 3.75 | 2.25 |
| 27 | 3.75 | 2.00† | 3 25‡ | S | 6 00 | 4 00 | 2 50 | 3 25 | 4 38 | 3.38 | 2.50 | 2.75‡ | 3.25 | 3.50 | S | 6 75 | 2 75 | 4 38‡ | ..... | 4 50 | S | ..... |
| 28 | 3.52 | 2 00† | S | 3 00 | 5 00 | 4 00 | 2 50 | 3 12 | S | 3 38 | 2.50 | 2.25‡ | 3.25 | S | 3 00 | 7 25 | 2 75 | 4 38‡ | ..... | S | 3.00 | ..... |
| 29 | 3.40 | S | 3 00‡ | 3 00 | 4 00 | 4 75‡ | 2 00 | S | 4.12 | 3 38 | 2.00 | 2.25‡ | 3.25 | 3.50 | 2 75 | 7 25 | 2 75 | 4 38‡ | ..... | 5 00 | ..... | 2.62 |
| 30 | 3.03 | 1.81† | 2 50‡ | 3 00 | 3.00 | 3 75‡ | S | 3 38 | 4.12 | 3 38 | 2.00 | 2.25‡ | S | 3.50 | 2 62 | 7 25 | 2 75 | S | ..... | 4.75 | ..... | 2.62 |
| 31 | 3.23 | ..... | 2 88‡ | 3.00 | 4.00 | S | 2 00 | 3.38 | 4.12 | 3 88 | 2.00 | S | 3.00 | 4.50 | 2.62 | 7 25 | 2.75 | 4.00‡ | ..... | 5 25 | ..... | ..... |

* When the date falls on Sunday, the average for Saturday and Monday is used.

† Average of fancy and poor to fair.

‡ Large and small. 1913, from January 1 thru March 26. 1914, from January 6 thru April 30. 1915, from January 1 thru April 30, and from November 30 thru December 31. 1916, from January 1 thru April 30, and from December 22 thru December 31. 1917, from January 1 thru February 25, and from April 9 thru April 27. 1921, from January 1 thru April 30. 1925, from January 1 thru March 31.

§ Florida and South Carolina peas, per basket.

TABLE 74 (*concluded*)

| Month and day | Five-year average, 1910–1914* | 1908 | 1909 | 1910 | 1911 | 1912 | 1913‡ | 1914‡ | 1915‡ | 1916‡ | 1917‡ | 1918 | 1919 | 1920 | 1921‡ | 1922 | 1923 | 1924 | 1925‡ | 1926 | 1927 | 1928 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| April | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 3 33 | 1 75 | 2.75‡ | 3.50 | 4.00 | 3 75‡ | 2 00 | 3 38 | 4 00 | 3.88 | S | 2.25‡ | 3.00 | 4 50 | 3.00 | 7.25 | S | 4.00‡ | 2.12¶ | 5.00 | .... | ..... |
| 2 | 3 20 | 1 62 | 2.94‡ | 3.50 | S | 3.75‡ | 2 00 | 3 12 | 4 00 | S | 2 00 | 2.25‡ | 2.25 | 4 50 | 3.00 | S | 2.75 | 4.00‡ | 2.12¶ | 4.75 | .... | ..... |
| 3 | 3 05 | 1 62 | 2.38‡ | S | 3.25 | 3.38‡ | 2 00 | 3 12 | 4 00 | 3.88 | 2 00 | 2.25‡ | 2.25 | 4.00 | S | 7.75 | 2.50 | 4.50‡ | 2.12¶ | 4.75 | .... | ..... |
| 4 | 2.80 | 1 62 | S | 3.50 | 2.50 | 3 38‡ | 1 50 | 3 12 | S | 3.88 | 2 00 | 2.25‡ | 2.25 | S | 3.00 | 7.75 | 2.50 | 4.38‡ | 2.12¶ | S | .... | 1.88 |
| 5 | 2 79 | S | 2.38‡ | 3.50 | 2.50 | 3 25‡ | 1 50 | S | 2 62 | 3.88 | 1 75 | 2.19‡ | 2.25 | 4 00 | 3.00 | 7.00 | 2.50 | 4.38‡ | S | 4.00 | .... | ..... |
| 6 | 2 80 | 1 50 | 2.38‡ | 3.50 | 2.50 | 3 25‡ | S | 3 25 | 2 62 | 3.88 | 2 00 | 2.19‡ | S | 3 00 | 3.00 | 6.62 | 2.50 | S | 1.94¶ | 3.75 | .... | ..... |
| 7 | 2 81 | 1 38 | 2.38‡ | 3.75 | 2.50 | S | 1 50 | 3 25 | 3 00 | 3.88 | 2 00 | S | 2.25 | 3 00 | 3.00 | ..... | 2.50 | 4.38‡ | 2.00¶ | 3.75 | 2.38 | 2.75 |
| 8 | 2 80 | 1 38 | 2.62‡ | 3.75 | 3.00 | 2 88‡ | 1 50 | 2 88 | 3 00 | 3.88 | S | 2.19‡ | 2.25 | 3 00 | 3.00 | ..... | S | 4.38‡ | ..... | 3.75 | 2.38 | S |
| 9 | 2 59 | 1 50 | 2.62‡ | 3.00 | S | 2 88‡ | 1 56 | 2 75 | 3 38 | S | 1 75 | 2.19‡ | 3.00 | 3 00 | 3.00 | S | 2.50 | 4.50‡ | ..... | 4.00 | 2.00 | 2.88 |
| 10 | 2 60 | 1 50 | 3.38‡ | S | 2.50 | 2 88‡ | 1 75 | 2 88 | 3 38 | 3.75 | 1 75 | 2.19‡ | 3.00 | 4 00 | S | ..... | 2.25 | 4.50‡ | 1.62 | 3.75 | S | 2.62 |
| 11 | 2 53 | 1 38 | S | 3.00 | 2.00 | 2 88‡ | 1 88 | 2 88 | S | 3.75 | 1 75 | 2.31‡ | 3.50 | S | ..... | ..... | 2.25 | 4.88‡ | 1.62 | S | 1.25 | 2.62 |
| 12 | 2 30 | S | 3.38‡ | 2.25 | 2.00 | 2 88‡ | 1 50 | S | 3 38 | 3.50 | 1 75 | 2.50‡ | 3.75 | .. | ..... | ..... | 2.25 | 4.88‡ | S | 3.50 | .... | 2.88 |
| 13 | 2 18 | 1 25 | 3.38‡ | 2.00 | 1.75 | 2 88‡ | S | 2 88 | 3 38 | 3.50 | 1 75 | 2.50‡ | S | .. | ..... | ..... | 2.25 | S | 1.50 | 3.50 | 1.38 | 2.75 |
| 14 | 2 05 | .... | 3.38‡ | 1.75 | 1.50 | S | 1 25 | 2 88 | 3 38 | 3 38 | 1 75 | S | .. | .. | ..... | 3.00 | 2.25 | 4.88‡ | 1.50 | 3.00 | .... | ..... |
| 15 | 2 16 | ... | 3.38‡ | 2.00 | 1.50 | 2 88‡ | 1 56 | 2 88 | 3 38 | 3.38 | S | ..... | .. | .. | ..... | 1.88 | S | 4.88‡ | 1.75 | 2.62 | .... | ..... |
| 16 | 2 19 | ... | 3.12‡ | 2.00 | S | 3 00 | 1 56 | 2 88 | 3 38 | S | 1 75 | ..... | .. | .. | ..... | S | 2.00 | 4.62‡ | 1.62 | 2.38 | .... | 3.25 |
| 17 | 2 21 | ... | 2.50 | S | 1.50 | 3 00 | 1 69 | 2 88 | 2 88 | 2 12 | 1 75 | ..... | .. | .. | ..... | 1.88 | 2.00 | 4.62‡ | ..... | 2.38 | .... | ..... |
| 18 | 2 14 | ... | S | 2.00 | 1.50 | 3 00 | 1 69 | 2 50 | S | 2 12 | 1 75 | ..... | .. | .. | ..... | ..... | ..... | 4.62‡ | ..... | S | .... | 2.88 |
| 19 | ... | ... | 1.75 | 1.50 | ..... | 2 75 | .. | S | 2 88 | 2 12 | 1 75 | ..... | .. | .. | ..... | ..... | 2.00 | 4.62‡ | S | 2.50 | .... | 3.50 |
| 20 | ... | ... | 1.50 | 1.50 | ..... | 2 25 | S | 2 50 | 2 12 | 2 12 | 1 75 | ..... | .. | .. | ..... | ..... | 2.00 | S | ..... | 2.12 | .... | ..... |
| 21 | ... | ... | 1.50 | ..... | ..... | S | .. | 2 50 | 2 12 | 2 12 | 1 75 | S | .. | .. | ..... | ..... | 2.00 | 3.75 | ..... | 2.12 | .... | ..... |
| 22 | ... | ... | 1.50 | ..... | ..... | 2 00 | .. | 3 50 | 1 94 | 2 12 | S | ..... | .. | .. | ..... | ..... | ..... | ..... | ..... | 2.75 | .... | ..... |
| 23 | ... | ... | 1.50 | ..... | ..... | 1 75 | .. | 3 62 | 1 94 | S | 1 75 | ..... | .. | .. | ..... | ..... | ..... | ..... | ..... | 2 75 | .... | ..... |
| 24 | ... | ... | 1.50 | S | ..... | .. | .. | 3 62 | 2 31 | 2 00 | 1 75 | ..... | .. | .. | ..... | ..... | ..... | ..... | ..... | 2 75 | .... | ..... |
| 25 | ... | ... | S | ..... | ..... | .. | .. | 3 00 | S | 2 00 | 1 75 | ..... | .. | .. | ..... | ..... | ..... | ..... | ..... | S | .... | ..... |
| 26 | ... | ... | 1.38 | ..... | ..... | .. | .. | S | 2 06 | 1 88 | 1 75 | ..... | .. | .. | ..... | ..... | ..... | ..... | ..... | ..... | .... | ..... |
| 27 | ... | ... | 1.38 | ..... | ..... | .. | .. | 2 50 | 2 06 | 1 88 | 1 75 | ..... | .. | .. | ..... | ..... | ..... | ..... | ..... | ..... | .... | ..... |
| 28 | ... | ... | 1.38 | ..... | ..... | .. | .. | 2 25 | 2 06 | 1 62 | 1 25 | ..... | .. | .. | ..... | ..... | ..... | ..... | ..... | ..... | .... | ..... |
| 29 | ... | ... | 1.38 | ..... | ..... | .. | .. | 2 25 | 2 06 | 1 62 | S | ..... | .. | .. | ..... | ..... | ..... | ..... | ..... | ..... | .... | ..... |
| 30 | ... | ... | ..... | ..... | ..... | .. | .. | .. | 2 06 | S | 1 25 | ..... | .. | .. | ..... | ..... | ..... | ..... | ..... | ..... | .... | ..... |
| November | | | | | | | | | | | | | | | | | | | | | | |
| 1 | ... | ... | ..... | ..... | ..... | .. | .. | .. | .. | .. | 4 50 | ..... | .. | .. | ..... | ..... | ..... | ..... | ..... | ..... | .... | ..... |
| 2 | .. | . | ..... | ..... | ..... | .. | .. | .. | .. | .. | 4 50 | ..... | .. | .. | ..... | ..... | ..... | ..... | ..... | ..... | .... | ..... |
| 3 | | | | | ..... | .. | .. | .. | .. | .. | 4 50 | ..... | .. | .. | ..... | ..... | ..... | ..... | ..... | ..... | .... | ..... |
| 4 | | | | | 3 00‡ | .. | .. | .. | .. | .. | S | ..... | .. | .. | ..... | ..... | ..... | ..... | ..... | 2 75 | .... | ..... |
| 5 | | | | | S | .. | .. | .. | .. | .. | 3 75 | ..... | .. | .. | ..... | ..... | ..... | ..... | ..... | 3 00 | .... | ..... |
| 6 | | | | | 3 00‡ | .. | .. | .. | .. | .. | .. | ..... | .. | .. | ..... | ..... | ..... | ..... | ..... | ..... | .... | ..... |
| 7 | | | | | | .. | 4 00 | .. | .. | .. | 3 50 | ..... | .. | .. | ..... | ..... | ..... | 2.00 | ..... | S | 5.00 | ..... |
| 8 | | | | | | 3 00 | 4 00 | .. | .. | .. | 3 75 | ..... | .. | .. | ..... | ..... | ..... | 2.00 | S | ..... | .... | ..... |
| 9 | | | 1 88 | | | 3 00 | S | 2 88 | 2 38 | .. | 3 75 | ..... | .. | .. | ..... | ..... | ..... | S | ..... | 3 25 | .... | ..... |
| 10 | | 2 50 | 1 75 | | | S | 4 00 | 2 88 | 2 38 | .. | 3 00 | S | .. | .. | ..... | ..... | 6.00 | 2 75 | ..... | 3 12 | .... | ..... |
| 11 | | 2 50 | 1 75 | | | 3 00 | 4 00 | 2 88 | 2 38 | .. | S | ..... | .. | .. | ..... | ..... | S | 2 50 | ..... | ..... | 3.50 | ..... |
| 12 | | 2 50 | 1 75 | | | 2 50 | 4 00 | 2 88 | 2 38 | S | 3 00 | ..... | .. | .. | ..... | ..... | 5.50 | 2 50 | ..... | ..... | 3.50 | ..... |
| 13 | | 2 50 | 1 75 | S | | 2 50 | 6 00 | 2 75 | 2 38 | .. | 3 00 | ..... | .. | .. | ..... | ..... | 6.00 | .. | 2.00 | .. | S | ..... |
| 14 | | 2 50 | S | | | 2 50 | 6 00 | 3 25 | S | .. | 3 00 | ..... | .. | .. | ..... | 5.50 | 6.50 | 3 25 | ..... | S | 3.50 | ..... |

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 15 | ..... | S | 1.75 | ..... | ..... | 2.50 | 6.00 | S | 2.38 | ..... | 3.00 | ..... | ..... | ..... | ..... | 5.50 | 7.00 | 2.25 | ..... | 3.62 | 3.50 | ..... |
| 16 | ..... | 3.00 | 1.50 | ..... | ..... | 2.50 | S | 3.25 | 2.50 | ..... | 3.00 | ..... | ..... | 6.50‡ | ..... | 5.50 | 7.50 | S | ..... | 3.88 | 3.50 | ..... |
| 17 | ..... | 3.00 | 1.50 | ..... | ..... | S | 4.50 | 3.25 | 2.50 | ..... | 3.00 | S | ..... | 6.50‡ | ..... | ..... | 7.50 | 2.38 | ..... | 3.62 | ..... | ..... |
| 18 | ..... | 3.00 | 1.50 | 7.50 | ..... | 2.75 | 4.50 | 3.25 | 2.50 | ..... | S | ..... | ..... | 6.50‡ | ..... | ..... | S | 2.75 | 2.00 | ..... | 3.75 | ..... |
| 19 | ..... | 3.25 | 1.75 | 7.50 | S | 3.50 | 3.50 | 3.25 | 2.50 | S | 4.50 | ..... | ..... | 6.25‡ | ..... | ..... | 5.50 | 2.75 | ..... | ..... | 3.50 | ..... |
| 20 | ..... | 3.00 | 1.75 | S | ..... | 3.00 | 3.50 | 3.50 | 2.50 | ..... | 4.50 | ..... | ..... | 6.25‡ | ..... | ..... | 5.50 | ..... | ..... | ..... | S | ..... |
| 21 | 4.40 | 3.00 | S | 7.50 | 4.00 | 3.00 | 4.00 | 3.50 | S | ..... | 4.50 | ..... | ..... | S | 2.25 | ..... | 5.75 | 4.00 | ..... | S | 3.25 | ..... |
| 22 | 4.45 | S | 1.75 | 7.50 | 4.00 | 3.00 | 4.00 | S | 2.50 | ..... | 4.50 | ..... | ..... | 6.25‡ | ..... | ..... | 5.50 | H | ..... | ..... | 3 25 | ..... |
| 23 | 4.60 | 3.00 | 1.75 | 7.50 | 4.00 | 3.00 | S | 4.00 | 3.75 | ..... | 4.50 | ..... | ..... | 5.00‡ | ..... | 6.50 | 7.50 | S | ..... | ..... | 2.62 | ..... |
| 24 | 4.70 | 2.75 | 1.75 | H | 4.50 | S | 5.00 | 4.25 | 3.75 | ..... | 4.50 | S | ..... | 5.00‡ | H | 6.50 | 7.50 | 5.00 | ..... | ..... | H | ..... |
| 25 | 5.12 | 2.75 | H | 6.00 | 4.50 | 3.00 | 7.50 | ..... | H | ..... | S | 5.50 | ..... | H | 6.00 | 7.00 | S | 4.50 | ..... | ..... | 2.62 | ..... |
| 26 | 5.22 | H | 2.00 | 6.00 | S | 3.50 | 7.50 | H | 3.75§ | S | 4.50 | 10.00 | ..... | 4.50‡ | 6.00 | S | 7.00 | 4.00 | H | ..... | 2.62 | ..... |
| 27 | 5.30 | 3.62‡ | 2.00 | S | 4.50 | 3.50 | H | 5.00 | 3.75§ | 5.50 | 4.50 | 10.00 | H | 4.50‡ | S | 7.25 | 6.50 | H | ..... | ..... | S | ..... |
| 28 | 5.28 | 3.62‡ | S | 6.00 | 4.50 | H | 7.50 | 5.00 | S | 7.00 | 5.00 | H | ..... | S | 6.00 | 7.75 | 5.50 | 3.25 | ..... | S | 2.50 | ..... |
| 29 | 5.00 | S | 2.00 | 4.50 | 4.25 | 3 25 | 7.50 | S | 3.75§ | 7.00 | H | 10.00 | 5.50 | 4.50‡ | 4.12 | 7.75 | H | 3.12 | S | ..... | 2.50 | ..... |
| 30 | 4.95 | 3.06‡ | 2.00 | 4.50 | H | 3.25 | S | 6.00 | 3.38 | H | 4.00 | 7.50 | S | 4.50‡ | 4.50 | H | 3.00 | S | ..... | ..... | 2.50 | ..... |
| December | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 4.87 | 2.62‡ | 2.25 | 5.00 | 4.25 | S | 6.00 | 6.00 | 3.38 | 5.00 | 3.50 | S | 5.50 | 3.50‡ | 4.50 | 7.50 | 3.00 | 3.38 | 3.25 | ..... | 2.62 | 3.50 |
| 2 | 4.85 | 2.12‡ | 2.25 | 5.00 | 4.25 | 3.00 | 6.00 | 6.00 | 3.50 | 5.00 | S | 7.50 | 5.00 | 3.50‡ | 4.50 | 8.00 | S | 4.50 | 3.25 | ..... | 2.50 | S |
| 3 | 4.85 | 2.25‡ | 2.25 | 5.00 | S | 3.00 | 6.00 | 6.00 | 3.50 | S | 4.00 | 7.00 | 5.00 | 3.50‡ | 4.50 | S | 2.50 | 4.50 | ..... | 3.00 | 2.50 | 2.75 |
| 4 | 4.60 | 2.25‡ | 2.25 | S | 4 25 | 3.00 | 4.00 | 7.00 | 3.50 | 3.50 | 4.00 | ..... | 4.75 | 4.25‡ | S | 8.00 | 2.75 | 4.50 | ..... | 3.00 | S | 2.38 |
| 5 | 4.50 | 2 25‡ | S | 4.50 | 4.00 | 3.00 | 4.00 | 7 00 | S | 3.00 | 4.00 | ..... | 4.75 | S | 4.50 | 8.00 | 2.50 | 4.75 | ..... | S | 2.50 | 2.38 |
| 6 | 4.00 | S | 3.00 | 3.50 | 3 00 | 3.00 | 4.00 | S | 3.50 | 3.00 | 4.50 | 6.25 | 4.50 | 4.25‡ | 4.50 | 8.75 | 3.50 | 4.00 | S | 2.75 | 2.75 | 2.38 |
| 7 | 3.90 | 2.38‡ | 3.50 | 3.50 | 3.00 | 3.00 | S | 6.00 | 3.38 | 3.00 | 4.50 | 6.00 | S | 4.25‡ | 4.50 | 8.75 | 3.25 | S | ..... | 2.75 | 2.62 | ..... |
| 8 | 3.90 | 2 12‡ | 3.50 | 3.50 | 3.00 | S | 4.00 | 6.00 | 3.12 | 3.50 | 4.50 | S | 4.50 | 4.25‡ | ..... | 9.00 | 3.25 | 3.50‡ | ..... | 2. 5 | 2.25 | ..... |
| 9 | 3.80 | 2 12‡ | 3.50 | 3.50 | 3.00 | 3.00 | 3.50 | 6.00 | 3.12 | 3.50 | S | 7.00 | 4.50 | 5.00‡ | 5.75 | 10.50 | S | 3.50‡ | ..... | 2.75 | 2.50 | ..... |
| 10 | 3.80 | 2 12‡ | 3.50 | 3.50 | S | 3.00 | 3.50 | 6.00 | 3.12 | S | 4.50 | 7.00 | 4.50 | 4.50‡ | 5.75 | S | 3.50 | 3.50‡ | ..... | 2.75 | 2.00 | 2.50 |
| 11 | 3.70 | 2 12‡ | 3.50 | S | 3.00 | 2.50 | 3.75 | 5.50 | 3.12 | 3.50 | 4.50 | 6.50 | 4.50 | 4.50‡ | S | 8 50 | 3.50 | 3.50‡ | 2.62 | 2.75 | S | 2.50 |
| 12 | 3.80 | 2.12‡ | S | 4.00 | 3.00 | 3.00‡ | 3.75 | 5.25 | S | 3.50 | 4.50 | 6.50 | 4.50 | S | 6.25 | 6 50 | 3.50 | 3.50‡ | 2.75 | S | 2.50 | 2.50 |
| 13 | 3.75 | S | 3.50 | 4.00 | 3 00 | 3.00‡ | 3.50 | S | 3.12 | 3.50 | 4.75 | 4.25 | 4.50 | 3.75‡ | 6.25 | 7.00 | 3.50 | 3.50‡ | S | 2.88 | 2.50 | 2.38 |
| 14 | 3.95 | 2.06‡ | 3.50 | 4.00 | 4.00 | 3.00‡ | S | 5 25 | 2.75 | 3.50 | 5.50 | 4.00 | S | 3.50‡ | 6.75 | 7.00 | 3.50 | S | ..... | 3.00 | 3.25 | 2.38 |
| 15 | 4.29 | 2.06‡ | 3.25 | ..... | 4.00 | S | 3.50 | 4.50 | 2.50 | 3.25 | 5.50 | S | 3.00 | 3.50‡ | 6.75 | 9.00 | 3.50 | 3.12‡ | ..... | 3.38 | 3.50 | 2.75 |
| 16 | 4.41 | 2.06‡ | 3.25 | ..... | 5.50 | 2.94‡ | 3.50 | 3.62 | 2.50 | 3.25 | S | 4.50 | 3.00 | 3.50‡ | 6.50 | 6 50 | S | 3.00‡ | ..... | 3.38 | ..... | S |
| 17 | 5.00 | 2.06‡ | 3 25 | 9.00 | S | 3.00‡ | 3.50 | 3.75 | 2 50 | S | 4.50 | 4.50 | 3.00 | 3.50‡ | 4.50 | S | 3.50 | 2.81‡ | ..... | 3.38 | ..... | 2.75 |
| 18 | 5.03 | 2.75‡ | 3 50 | S | 6.00 | 2.88‡ | 3.50 | 3.75 | 2.25 | 3.50 | 4.50 | 4.50 | 3.00 | 3.50‡ | S | 4.50‡ | 3.38 | 2.81‡ | ..... | 3.38 | S | 2.75 |
| 19 | 5.03 | 2.75‡ | S | 9.00 | 6 00 | 2.88‡ | 3.50 | 3.75 | S | 3.50 | 4.50 | 4.50 | 3.00 | S | 4.50 | 4.00‡ | 3.25 | 2.81‡ | ..... | S | 2.50 | ..... |
| 20 | 4.93 | S | 4.00 | 8.50 | 6.00 | 2.88‡ | 3.50 | S | 2.25 | 3.50 | 4.50 | 4.50 | 3.50 | 3.50‡ | 4.50 | 4.00‡ | 3.12‡ | 2.81‡ | ..... | 3.38 | 2.75 | ..... |
| 21 | 4.93 | 2 75‡ | 4.00 | 8.50 | 6.00 | 2.88‡ | S | 3.75 | 2.25 | 4.00 | 2.50 | 5.00 | S | 3.50‡ | 4.50 | 3.75‡ | 3.19‡ | S | ..... | 3.25 | 3.00 | 2.88 |
| 22 | 4.93 | 2 75‡ | 4.00 | 8.50 | 6.00 | S | 3.50 | 3.75 | 2.62 | 4 25 | 2.50 | S | 3.50 | 3.50‡ | 4.50 | 3.75‡ | 3.06‡ | 3.06‡ | ..... | 3.25 | 3.00 | 3.50 |
| 23 | 4.83 | 3.75 | 4.00 | 8.50 | 5 00 | 2.88‡ | 3.50 | 4 25 | 2.62 | 4.25 | S | 5.00 | 3.50 | 3.50‡ | 4.50 | 3 75‡ | S | 3.06‡ | ..... | 3.25 | 3.38 | S |
| 24 | 4.63 | 3.75 | 4.00 | 8.50 | S | 2.88‡ | 3.50 | 4 25 | 2.62 | S | 2.50 | 5.00 | 3.50 | 3.50‡ | 4.50 | S | 2.50‡ | 3.50‡ | ..... | 3.00 | 3.38 | 3.50 |
| 25 | H | H | H | S | H | H | H | H | H | H | H | H | H | H | S | H | H | H | H | H | S | H |
| 26 | 4.03 | 3 25 | S | H | 3 00 | 2.88‡ | 3.50 | 3.00 | S | 4.25 | 3.00 | 5.00 | 3.50 | S | H | 3 75‡ | 2.50‡ | 4.19‡ | ..... | S | H | 3.38 |
| 27 | 3.78 | S | 4.00 | 7.00 | 2 50 | 2.88‡ | 3.50 | S | 2.62 | 4.12 | 3.00 | 5.00 | 3.50 | 3.00‡ | 4.00 | 3 75‡ | 2.31‡ | 4.19‡ | ..... | 2 75 | 4.75 | 3.38 |
| 28 | 3.63 | 3 25 | 4 50 | 6.00 | 2 50 | 2.88‡ | S | 3.00 | 3 00 | 4.12 | 3.00 | 5.00 | S | 2.88‡ | 4.00 | 3 75‡ | 2.38‡ | S | 2.75 | 2 75 | 4.75 | 3.00 |
| 29 | 3.55 | 3 25 | 4 50 | 5 50 | 2 50 | S | 4.00 | 3 00 | 3.00 | 3.88 | 3.00 | S | 3.50 | 2.88‡ | 4.00 | 3.75‡ | 2.50‡ | 4.38‡ | 2.88 | 2.75 | 4.25 | 3.25 |
| 30 | 3.42 | 3 25 | 4 50 | 5 00 | 2 50 | 2.62‡ | 4.00 | 3 00 | 3.00 | 4.12 | S | 5.00 | 3.50 | 2.88‡ | 4.00 | 3 75‡ | S | 4.38‡ | 2.88 | 2 75 | 4.00 | S |
| 31 | 3.70 | 3.25 | 4 50 | 5.00 | S | 2.62‡ | 4.00 | 3.12 | 4.00 | S | 3.00 | 4.50 | 3.50 | 2.88‡ | 4.00 | S | 2.56‡ | 4.38‡ | 3.38 | 2.75 | ..... | 3.25 |

* When the date falls on Sunday, the average for Saturday and Monday is used.

‡ Large and small. 1913, from January 1 thru March 26. 1914, from January 6 thru April 30. 1915, from January 1 thru April 30, and from November 30 thru December 31. 1916, from January 1 thru April 30, and from December 22 thru December 31. 1917, from January 1 thru February 25, and from April 9 thru April 27. 1921, from January 1 thru April 30. 1925, from January 1 thru March 31.

‖ South Carolina peas.

¶ Average of best, and poor to fair or good.

TABLE 75. AVERAGE DAILY WHOLESALE PRICES OF SOUTH CAROLINA PEAS IN NEW YORK CITY, PER 28-QUART BASKET
(H = holiday, S = Sunday)

| Month and day | Five-year average, 1910–1914* | 1908 | 1909 | 1910 | 1911 | 1912 | 1913 | 1914 | 1915 | 1916 | 1917 | 1918 | 1919 | 1920 | 1921 | 1922 | 1923 | 1924 | 1925 | 1926 | 1927 | 1928 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| April | | | | | | | | | | | | | | | | | | | | | | |
| 1 | | $2 50 | | | | | $2 25 | | | | | | | | $3.00 | | | | $2.38††† | | | |
| 2 | | 2.50 | | | | | 2.25 | | | | | | | | 3.00 | S | | | 2 56** | | | |
| 3 | | 2.00 | | | $4.00 | | 2.25 | | | | | $2 50 | | | S | $6.00 | | | 1.38 | | | |
| 4 | | 2.00 | | | 3.25 | | 1.75 | | | | | 2.25 | | | 3.25 | 5 88¶ | | | 1.38 | | | |
| 5 | | S | | | 3.50 | | 1.56 | | | | | 2.75 | | | 3.50 | 5.88¶ | | | S | | | |
| 6 | | 1.88 | | | 3.88 | | S | | | | | 2.50 | S | | 3.50 | 5.62¶ | | | 1.75 | | | |
| 7 | | 1.50 | | | 4.00 | S | 1.56 | | | | | S | | | 3.50 | 3.00† | | | 2.00 | | $2.38 | |
| 8 | | 1.50 | | | 4.25 | | 1.56 | | | | | 2.25 | | | 3.25 | 3.00† | S | | 2.00 | | 2.25 | |
| 9 | | 1.50 | | | S | | 1.56 | | | | | 2.25 | | | 3.00 | S | | | 2.00 | | 1.75 | |
| 10 | | 1.88 | | | 3.88 | | 1.75 | | | | | 2.25 | $3.50† | | S | 3.19 | | | 2.12 | | S | |
| 11 | | 2.06 | S | $2.75 | 2.88 | | 1.88 | | | | | 2.25 | 3.50† | S | 3.00 | 3.12 | | | 2.25 | | 1.62 | |
| 12 | | S | $3.50† | 2.50 | 2.62 | | 1.50 | | | | | 2.25 | 3.75† | | 2.88 | 2.00 | | | S | | 1.50 | |
| 13 | | 1.50 | 3.50† | 2.25 | 2.62 | | S | | | $4.00 | $2.50 | 2.25 | S | | 2.62 | 1.72 | $3.75 | S | 2.12 | | 1.50 | |
| 14 | | 1.25 | 3.50† | 2.00 | 2.50 | S | 1.25 | | | 3.50 | 2.38 | S | 4.00† | | 2.62 | 1.81 | 3.88 | | 2.00 | | 1.62 | |
| 15 | | 1.25 | 3.50† | 2.25 | 2.50 | | 1.56 | | | 3.50 | S | 3.12 | 3.75† | | 3.06 | 1.31 | S | | 2.00 | | 1.62 | |
| 16 | | 1.44 | 3.25† | 2.25 | S | $3.50 | 1.56 | | | S | 2.12 | 3.31 | 3.75† | | 3.06 | S | 3.88 | | 2.00 | | 1.50 | $4 50 |
| 17 | | 1.88 | 2.50 | S | 2.44 | 3.50 | 1.69 | | $3.00 | 2.62 | 2.12 | 3.19 | 4.00† | | S | 1.94 | 3.75 | $5.50 | 2.00 | | S | 3.88 |
| 18 | | 1.62 | S | 1.75 | 2.25 | 3.50 | 1.69 | | S | 2.50 | 2.12 | 3.25 | 4.00† | S | 3.44 | 1.69 | 3.94 | 5.75 | 1.88 | | 1.38 | 4.25 |
| 19 | $2.09 | S | 2.00 | 1.25 | 2.19 | 3.00 | 1.50 | $2.50§ | 3.00 | 2.50 | 2.12 | 3.25 | 4.00† | | 3.44 | 2.00 | 3.81 | 5.75 | S | | 1.32 | |
| 20 | 2.09 | 1.56 | 1.88 | 1.50 | 2.19 | 2.75 | S | 2.50§ | 3.00 | 2.25 | 2.12 | 3.25 | S | | 3.44 | 1.94 | 4.12 | S | 1.50 | | 1.25 | 2.75 |
| 21 | 1.99 | 1.75 | 1.88 | 1.88‡ | 2.06 | S | 1.50 | 2.50§ | 3.00 | 1.88 | 2.12 | S | 3.00† | | 3.44 | 2.69 | 3.50 | 4.25 | 1.38 | | 1.62 | 2.75 |
| 22 | 2.15 | 1.75 | 1.54 | 1.88‡ | 2.00 | 2.50 | 1.50 | 3.50§ | 2.88 | 1.88 | S | 3.25 | 3.25 | | 3.50 | 2.25 | S | 4.75 | 1.50 | | 1.38 | S |
| 23 | 2.05 | 1.81 | 1.62 | 1.56‡ | S | 2.00 | 1.50 | 3.62§ | 3.00 | S | 2 62 | 3.00 | 3.25 | | 2.88 | S | 3.38†† | 4.75 | 1 62 | $2.88 | 1.50 | 2.50 |
| 24 | 2.05 | 1.81 | 1.75 | S | 2.19 | 2.00 | 1.50 | 3.62§ | 2.25 | 2.00 | 2.62 | 2.81 | 3.25 | | S | 1.38** | 3.38†† | 4.00 | 1.88 | 2.88 | S | 2.38 |
| 25 | 2.15 | 1.81 | S | 1.31‡ | 2.00 | 1.88 | 1.50 | 4.50 | S | 2.00 | 1.94 | 2.69 | 3.25 | S | 2.88 | 1.50** | 3.75†† | 4.00 | 1.75 | S | 1.50 | 2.00 |
| 26 | 2.06 | S | 1.50 | 1.31‡ | 2.00 | 2.00 | 1.50 | S | 2.75 | 2.00 | 1.94 | 2.25 | 3.25 | $3.00 | 2.88 | 1.62** | 3.75†† | 3.44 | S | 2.88 | 1.94††† | 2.38 |
| 27 | 2 06 | 1.62 | 1.50 | 1.50‡ | 2.50 | 1.88 | S | 3.38 | 2.75 | 2.00 | 2.12 | 2 25 | S | 3.00 | 2.88 | 1.50** | 3.62†† | S | 1.38 | 3.12 | 2.56††† | 2.50‡‡‡ |
| 28 | 1.87 | 1.44 | 1.69 | 1.44‡ | 2.50 | S | 1.62 | 2.50 | 2.56 | 1.81 | 1.62 | S | 3.25 | 2.50 | 2.88 | 1.62** | 3.88†† | 2.88 | | 3.88 | 2.56††† | 2.31‡‡‡ |
| 29 | 1.86 | 1.44 | 1.62 | 1.50‡ | 2.50 | 1.69 | 1.62 | 2.50 | 2.56 | 1.81 | S | 2.25 | 3.25 | 2.25 | 2.88 | 1.62** | S | 2.81 | | 3.75 | 2.81††† | S |
| 30 | 1.80 | 1.31 | 1.62 | 1.35‡ | S | 1.69 | 1.62 | 2.31 | 2.62 | | 1.50 | 2.25 | 3.00 | 2.25 | 2.88 | S | 4.19†† | 2.81 | | 3.38 | 2.94††† | 2.19‡‡‡ |
| May | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 1.74 | 1.31 | 1.25 | S | 2.50 | 1.69 | 1.62 | 2.12 | 2.62 | 1.75 | 2.12 | 2.25 | 3.50 | 2.00 | S | 1.75** | 4.00†† | 2.62 | 3.00 | 2.88 | S | 2.31‡‡‡ |
| 2 | 1.70 | 1.06 | S | 0.68 | 2.50 | 1.56 | 1.62 | 2.12 | S | 1.62 | 1.81 | 2.50 | 3.00 | S | 2.38 | 2.00** | 3.12 | 2.50 | 2.75 | S | 3.69††† | 2.31‡‡‡ |
| 3 | 1.68 | S | 1.12 | 0.88 | 2.50 | 1.38 | 1.56 | S | 2.00 | 1.62 | 1.81 | 2.50 | 3.00 | 2.00 | 2.19 | 2.12** | 3.06 | 2.06 | S | 2.50 | 3.56††† | 2.88‡‡‡ |
| 4 | 1 63 | 0.94 | 1.12 | 0.88 | 2.50 | 1.19 | S | 2.00 | 1.88 | 1.62 | 1.81 | 2.50 | S | 1.75 | 2.19 | 2.38** | 3.12 | S | 2.75 | 1.75 | 3.31††† | 2.81‡‡‡ |
| 5 | 1.51 | 0.94 | 1.25 | 1.00 | 2.12 | S | 1.56 | 1.75 | 1.88 | 1.62 | 1.69 | S | 3.00 | 1.75 | 2.19 | 2.25** | 3.50 | 2.12 | 2.50 | | 3.56††† | 2.44‡‡‡ |
| 6 | 1.52 | | 1.00 | 0.88 | 2.12 | 1.06 | 1.56 | 2.00 | 1.88 | 1.38 | S | 2.94 | 2.75 | 1.50 | 2.19 | | S | 1.88 | 2.50 | 2.44‖ | 2.25††† | S |
| 7 | 1.45 | | | 0.88 | S | 1.06 | | 2.00 | 1.94 | S | 1.69 | 2.75 | 2.75 | 1.50 | 2.19 | S | 5.00 | 1.88 | 2.50 | 2.31‖ | | 2.19‡‡‡ |
| 8 | 1.35 | | | S | 1.19 | 1.06 | 1.75 | 1.88 | 1.88 | 1.38 | 1.62 | 2.88 | 2.75 | 1.75 | S | 1.75 | 3.69§§ | 2.06 | 2.38 | 2.25‖ | S | 2.19‡‡‡ |
| 9 | 1.28 | | | 0.88 | 1.19 | 1.06 | 1.75 | 1.50 | S | 1.38 | 1.62 | 3.00 | 2.62 | S | 2.19 | 1.62 | 4.25§§ | 2.38 | | S | 2.12 | 1.75‡‡‡ |
| 10 | 1.25 | | | 0.88 | 1.19 | 1.06 | 1.62 | S | 1.59 | 1.19 | 1.62 | 2.75 | 2.62 | 1.88 | 2.19 | 1.62 | 3.00‡‡ | 2.12 | S | 1.94‖ | | |
| 11 | | | | 1.00 | 1.19 | | S | 1.50 | 1.59 | | 1.56 | 2.50 | S | 2.00 | 2.19 | 1.75 | 3.25‡‡ | S | | 1.62 | | 1.75 |
| 12 | | | | 0.88 | 1.19 | S | | 1.50 | 1.46 | | 1.56 | S | 2.62 | 2.00 | 2.19 | | 3.00 | 1.94 | | 1.81 | | 1.75 |
| 13 | | | | | 0.81 | | 1.50 | 1.19 | 1.31 | | S | 2.25 | 2.62 | 2.06 | | | | 1.62 | | 1.88 | | S |
| 14 | | | | 0.75 | S | 0.75 | 1.50 | | 1.12 | | 1.38 | 2.25 | 2.62 | 2.25 | | | 2.75 | 1.38 | | 1.88 | | 1.25 |
| 15 | | | | S | 0.81 | 0.75 | 1.25 | | 1.12 | | 1 38 | 2.25 | 2 62 | 2 25 | | | 2.38 | 1.44 | | 1.88‖ | S | 1.12 |
| 16 | | | | 0.75 | 0.88 | 0.75 | 1.25 | | | | 1.38 | 2.00 | 2.88 | S | 1.50 | | 2.00 | 1.62 | | S | 1.25 | 1.38 |

| | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 17 | | | | | 0.88 | 0.75 | 1.25 | | 0.69 | | 1.38 | 2.06 | 2.62 | 2 25 | 1.50 | 1.88 | 2 00 | 1.56‡‡ | | 1.69¶ | | 1.00 |
| 18 | | | | | 0.75 | 0.75 | | | 0 69 | | 1.38 | 2.06 | S | 1.88 | 1.50 | | 2 00 | S | | 1.69¶ | | 1.25 |
| 19 | | | | | 0 75 | | | | 0.75 | | 1.38 | S | 2.38 | 1.69 | 1 50 | 4.25 | 1.25 | 1.12*** | | 1.50 | | 1.00 |
| 20 | | | | | | | | | | | S | | | 1 69 | 1.50 | 4.25 | S | 1.38*** | | | | S |
| 21 | | | | | | | | | | | | | | 1.69 | | | 1.25 | 1.38*** | | | | 1.25 |
| 22 | | | | | | | | | | | | | | 1.38 | | | 1.38 | 1 62*** | | | | |
| 23 | | | | | | | | | | | | | | | | | 1.25 | 1.75*** | | | | 0.75 |
| 24 | | | | | | | | | | | | | | 1.25 | | | 1.38 | 1.50*** | | | | |
| 25 | | | | | | | | | | | | | | 1.25 | | | | | | | | |
| 26 | | | | | | | | | | | | | | 1.25 | | | | 1.25*** | | | | |
| 27 | | | | | | | | | | | | | | 1.31 | | | | | | | | |
| 28 | | | | | | | | | | | | | | 1.62 | | | | 1.62*** | | | | |
| 29 | | | | | | | | | | | | | | 1.62 | | | | | | | | |
| 30 | | | | | | | | | | | | | | | | | | | | | | |
| 31 | | | | | | | | | | | | | | | | | | | | | | |
| October | | | | | | | | | | | | | | | | | | | | | | |
| 25 | | | | | | | | | | | | | | | | | | | 2.12 | | | |
| November | | | | | | | | | | | | | | | | | | | | | | |
| 1 | | | | | | | | | | | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | | | | | | | | | | | 3.25 |
| 3 | | | | | | | | | | | | | | | | | | | | | | 3.12 |
| 4 | | | | | | | | | | | | | | | | | | | 3.00 | | | S |
| 5 | | | | | | | | | | | | | | | | | | | 2.00 | | | 2.75 |
| 6 | | | | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | S | | | 2.75 |
| 8 | | | | | | | | | | | | | | | | | | | 2.75 | | | |
| 9 | | | | | | | | | | | | | | | | | | | | | | 2.50 |
| 10 | | | | | | | | | | | | | | | | | | | | | | 2.50 |
| 11 | | | | | | | | | | | | | | | | | | | | | | S |
| 12 | | | | | | | | | | | | | | | | | | | | | | |
| 13 | | | | | | | | | | | | | | | | | | | | S | | 3.62 |
| 14 | | | | | | | | | | | | | | | | | | | | 5.00 | | 3.88 |
| 15 | | | | | | | | | | | | | | | | | | | 3.62 | | | |
| 16 | | | | | | | | | | | | | | | | | | | 4.00 | 4.00 | | |
| 17 | | | | | | | | | | | | | | | | | | | 3.50 | | | |
| 18 | | | | | | | | | | | | | | | | | | | | | | |
| 19 | | | | | | | | | | | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | | | | | | | | | S | | |
| 21 | | | | | | | | | | | | | | | | | | | | 4.00 | | 5.50 |
| 22 | | | | | | | | | | | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | | | | | | | | 3.25 | | | 4.50 |
| 24 | | | | | | | | | | | | | | | | | | | | | | |
| 25 | | | | | | | | | | | | | | | | | | | | | | |
| 26 | | | | | | | | | | | | | | | | | | | | | | |
| 27 | | | | | | | | | | | | | | | | | | | 2.75 | | | |
| 28 | | | | | | | | | | | | | | | | | | | | 3.00 | | |
| December | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | 2.25 | | |
| 6 | | | | | | | | | | | | | | | | | | | | 2.38 | | |
| 7 | | | | | | | | | | | | | | | | | | | 1.75 | | | |
| 8 | | | | | | | | | | | | | | | | | | | 1.75 | | | |

* When the date falls on Sunday, the average for Saturday and Monday is used. Quotations per half-barrel basket apparently are for 40 quarts, and may be converted to a 28-quart basis by multiplying by 70. In finding the 1910–1914 average this was done.

† Small, per basket.
‡ Per half-barrel basket.
§ Florida peas.
‖ Average of large and small, per basket.
¶ Telephone, per basket.
** Average per basket.
†† South Carolina and Georgia peas.
‡‡ Carolina peas.
§§ Carolina peas, best and poor to fair averaged.
*** Carolina peas, per bushel basket.
††† Average of best and poor to fair, per basket.
‡‡‡ Average of best and poor to good.

TABLE 76. AVERAGE DAILY WHOLESALE PRICES OF NORTH CAROLINA PEAS IN NEW YORK CITY, PER 28-QUART BASKET
(H = holiday, S = Sunday)

| Month and day | Five-year average, 1910–1914* | 1908 | 1909 | 1910‡ | 1911 | 1912 | 1913† | 1914 | 1915 | 1916 | 1917 | 1918 | 1919§ | 1920 | 1921 | 1922 | 1923 | 1924 | 1925 | 1926 | 1927§ | 1928 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| May | | | | | | | | | | | | | | | | | | | | | | |
| 1 | ..... | $1.25† | $2.12‡ | S | $2.50 | $1.94 | $2.00 | ..... | ..... | ..... | ..... | $1.75 | ..... | ..... | S | $2.12 | ..... | ..... | $3.25 | ..... | S | ..... |
| 2 | ..... | 0.88† | S | $1.44 | 2.50 | 1.88 | 1.94 | ..... | ..... | ..... | $1.75 | ..... | ..... | ..... | $2.88 | 2.88 | ..... | ..... | 3.38 | ..... | $4.50 | ..... |
| 3 | ..... | S | 1.52 | 1.38 | 2.50 | 1.69 | 1.50 | S | ..... | ..... | 1.62 | ..... | ..... | ..... | 2.62 | 2.88 | ..... | ..... | S | ..... | 4.25 | ..... |
| 4 | ..... | 0.88† | 1.50 | 1.62 | 2.50 | 1.44 | S | ..... | ..... | $1.94 | 1.62 | ..... | ..... | ..... | 2.62 | 2.88 | ..... | ..... | 3.25 | ..... | 4.50 | $3.25 |
| 5 | ..... | 0.88† | 1.75 | 1.62 | 2.25 | S | 1.88 | ..... | ..... | 1.81 | 1.38 | S | ..... | ..... | 2.62 | 2.25 | ..... | ..... | 2.50 | ..... | 4.12 | 3.25 |
| 6 | ..... | 1.12† | 0.96 | 1.62 | 2.62 | 1.44 | 1.88 | ..... | ..... | 1.59 | S | 3.25§ | ..... | ..... | 2.62 | 1.88 | ..... | ..... | 2.75 | ..... | 4.25 | S |
| 7 | ..... | 1.00† | 0.81 | 1.62 | S | 1.38 | 2.62 | $2.25 | ..... | S | 1.38 | 3.25§ | $2.75 | ..... | 2.62 | S | ..... | ..... | 2.75 | ..... | 3.75 | 2.75†† |
| 8 | ..... | 1.00† | 0.75 | S | 2.69 | 1.38 | 2.00 | 1.94 | $1.38 | 1.62 | 1.38 | 3.25§ | 3.25 | ..... | S | 1.88 | ..... | ..... | 3.00 | ..... | S | 2.75†† |
| 9 | ..... | 1.00† | S | 1.50 | 2.69 | 1.38 | 2.00 | 1.94 | S | 1.62 | 1.38 | 2.88‡ | 3.56 | ..... | 2.62 | 1.88 | ..... | ..... | 2.62 | ..... | 3.00 | 3.06†† |
| 10 | ..... | S | 0.75 | 1.50 | 2.75 | 1.38 | 2.00 | S | 1.88 | 1.60 | 1.38 | 2.12‖ | 3.19 | ..... | 2.62 | 1.88 | ..... | ..... | S | ..... | 2.50 | 2.81†† |
| 11 | $1.54 | 0.88† | 0.75 | 1.44 | 2.25 | 1.25 | S | 1.50 | 1.88 | 1.56 | 1.88 | 2.00‖ | S | ..... | 2.62 | 2.12 | ..... | ..... | 2.25 | ..... | 2.38 | 2.94†† |
| 12 | 1.37 | 0.88† | 1.19 | 1.25 | 1.88 | S | 1.50 | 1.50 | 1.81 | 1.38 | 1.88 | S | 3.06 | ..... | 2.62 | 2.12 | ..... | $2.31¶ | 2.44 | ..... | 2.12 | 2.56†† |
| 13 | 1.19 | 1.00† | 1.06 | 1.06 | 1.56 | 1.06 | 1.50 | 1.12 | 1.44 | 1.38 | S | 1.75‖ | 3.31 | ..... | 2.25 | 2.25 | ..... | 2.06¶ | 2.44‡ | $2.00 | 1.88 | S |
| 14 | 1.11 | 0.62† | 1.03 | 1.06 | S | 1.06 | 1.50 | 0.81 | 1.38 | S | 1.75 | 1.75 | 3.31 | ..... | 1.69 | S | $3.75 | 1.38† | 2.81‡ | 2.81** | 1.38 | 2.19†‡ |
| 15 | 1.05 | 0.62† | 0.83 | S | 1.34 | 1.31 | 1.12 | 0.75 | 1.29 | 1.50 | 1.75 | 1.75‖ | 3.38 | $3.50 | S | 2.12 | 2.56 | 1.38† | 2.38‡ | 2.81** | S | 1.75†‡ |
| 16 | 1.20 | 0.58† | S | 1.09 | 1.56 | 1.25 | 1.09 | 1.38 | S | 1.50 | 2.06 | 1.38‖ | 4.00 | S | 1.69 | 2.00 | 2.56 | 1.62† | 2.69‡ | S | 1.38 | 1.94†‡ |
| 17 | 1.23 | S | 0.75 | 1.19 | 1.62 | 1.25 | 1.09 | S | 0.94 | 1.62 | 2.12 | 1.50‖ | 3.62 | 3.25 | 1.56 | 2.25 | 2.50 | ..... | S | 2.62** | 1.62 | 2.00†‡ |
| 18 | 1.25 | 0.58† | 0.75 | 1.38 | 1.25 | 1.00 | S | 1.44 | 0.94 | 1.44 | 2.12 | 1.50‖ | S | ..... | 1.38 | 2.62 | 2.38 | S | 2.12 | 2.31** | 1.88 | 1.94†‡ |
| 19 | 1.24 | 0.58† | 0.88 | 1.38 | 0.94 | S | 1.31 | 1.56 | 0.69 | 1.44 | 1.81 | S | 3.38 | 2.88 | 2.38 | 2.62 | 1.81 | ..... | 2.12‡ | 2.56** | 2.50 | 1.75†‡ |
| 20 | 1.18 | 0.50† | 0.69 | 1.62 | 0.72 | 1.00 | 1.31 | 1.25 | 0.51 | 1.12 | S | 1.12‖ | 3.12 | 2.88 | 2.25 | 2.62 | S | ..... | 2.38 | 2.69** | 2.55 | S |
| 21 | 1.12 | 0.42† | 0.62 | 1.38 | S | 1.00 | 1.31 | 1.25 | 0.51 | S | 1.62 | 1.12‖ | 2.88 | 2.31 | 2.12 | S | 1.44 | ..... | 2.38 | 2.50** | 2.12 | 1.75†‡ |
| 22 | 1.05 | 0.50 | 0.62 | S | 0.65 | 1.19 | 1.31 | 1.19 | 0.51 | 1.19 | 1.62 | 1.00‖ | 3.50 | 2.25 | S | 2.50§ | 1.25 | ..... | 2.00‡ | 2.00** | S | 1.44†‡ |
| 23 | 1.04 | 0.40 | S | 1.38 | 0.65 | 1.12 | 1.19 | 0 88 | S | 1.19 | 1.69 | 0.75‖ | 2.50 | S | 1.62 | 4.00§ | 1.12 | ..... | 1.81‡ | S | 2.00 | 1.00†† |
| 24 | 1.09 | S | 0.75 | 1.38 | 0.94 | 1.12 | 1.19 | S | 0.65 | 1.50 | 1.44 | 0.75‖ | 2.06 | 2.06 | 1.62 | 4.25§ | 1.12 | ..... | S | 2.06** | 1.75 | 1.31†† |
| 25 | 1.01 | 0.45 | 0.75 | 1.25 | 0.66 | 1.12 | S | 0.81 | 0.88 | 1.38 | 1.19 | 0.75‖ | S | 1.81 | 1.62 | 4.75§ | 1.12 | ..... | 2.00‡ | 2.31** | 1.50 | 1.25†† |
| 26 | 0.88 | ..... | 0.75 | 0.75 | 0.62 | S | 1.19 | 0.81 | 0.88 | 1.38 | 0.88 | S | 2.06 | 2.00 | 1.62 | 3.88§ | 0.75 | ..... | 2.25‡ | 2.06** | 1.62 | 1.04†† |
| 27 | 0.90 | ..... | 0.72 | 0.75 | 0.62 | 0.94 | 1.38 | 0.81 | 0.69 | 1.38 | S | 0.75‖ | 1.62 | 2.25 | 1.62 | 3.00§ | S | ..... | 2.75‡ | 2.00** | 1.38 | S |
| 28 | ..... | 0.52 | 0.62 | 0.75 | S | 0.94 | ..... | 0.69 | 0.69 | S | 0.94 | 0.75‖ | 1.62 | 2.50 | 1.38 | S | 1.81 | 2.00¶ | 3.25‡ | 1.56** | 1.25 | 0.91†† |
| 29 | ..... | 0.52 | 0.62 | S | 0.44 | 0.94 | ..... | 0.60 | 0.69 | 1.25 | 0.94 | 0.75‖ | 2.00 | 2.50 | S | 1.88 | 1.62 | 2.06¶ | 2.50‡ | 1.44** | S | 1.12 |
| 30 | ..... | H | S | H | H | H | H | H | S | H | H | H | H | S | H | H | H | H | H | S | H | H |
| 31 | ..... | S | H | ..... | 0.44 | ..... | ..... | S | H | 1.19 | 0.94 | 0.62‖ | 1.75 | H | 1.25 | 1.38 | 1.69 | 1.75¶ | S | H | 1.62 | ..... |
| June | | | | | | | | | | | | | | | | | | | | | | |
| 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 0.38 | ..... | 1.06 | 0.94 | 0.62‖ | S | 2.38 | 0.88 | 1.38 | 1.62 | S | 1.50‡ | 1.62** | 1.62 | 2.38†‡ |
| 2 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 0.38 | ..... | 1.06 | 0.62 | S | 2.00 | 2.12 | 0.88 | 1.75 | 1.38 | 2.00¶ | 1.75‡ | 1.75** | 2.50 | 2.69†‡ |
| 3 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 0.38 | ..... | 1.06 | S | 0.62‖ | 2.00 | 2.12 | 0.88 | 1.50 | S | 2.25¶ | 1.38‡ | 1.69** | 2.50 | S |
| 4 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 0.38 | ..... | S | 0.60 | 0.75 | 1.75 | 2.06 | 0.88 | S | 1.38 | 2.25¶ | 1.38‡ | 1.75** | 3.00 | 2.25†‡ |
| 5 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 0.38 | ..... | 1.06 | 0.60 | 0.75 | 1.38 | 2.25 | S | ..... | 1.81 | 2.75¶ | 1.12‡ | 1.44** | S | 2.41†‡ |
| 6 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 0.38 | ..... | 1.06 | 0.69 | 0.75 | 1.25 | S | ..... | ..... | 1.81 | 2.62¶ | ..... | S | 2.50 | 2.50†‡ |
| 7 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | S | ..... | 1.06 | 0.69 | 0.75 | 0.94 | 2.25 | ..... | ..... | 1.81 | 2.38¶ | S | 1.44** | 2.25 | 2.50†‡ |
| 8 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1.06 | 0.69 | 0.75 | S | 2 00 | ..... | ..... | 2.00 | S | ..... | 1.75** | ..... | 2.12†‡ |
| 9 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1.06 | 0.69 | ..... | ..... | 2.00 | ..... | ..... | 1.94 | 2.31¶ | 1.25 | 1.75** | ..... | 1.38†‡ |

| | | |

TABLE 77. AVERAGE DAILY WHOLESALE PRICES OF VIRGINIA PEAS IN NEW YORK CITY, FALL CROP, PER 32-QUART BASKET
(H = holiday, S = Sunday)

| Month and day | Five-year average, 1910–1914* | 1908 | 1909 | 1910† | 1911‡ | 1912 | 1913 | 1914 | 1915 | 1916 | 1917 | 1918 | 1919 | 1920 | 1921 | 1922 | 1923 | 1924¶ | 1925 | 1926 | 1927 | 1928 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| September | | | | | | | | | | | | | | | | | | | | | | |
| 20 | | | $1.06 | | | | | | | | | | | | | | | | | | | |
| 21 | | | 1.06 | | | | | | | | | | | | | | | | | | | |
| 22 | | | 1.06 | | | | | | | | | | | | | | | | | | | |
| 23 | | | 1.06 | | | | | | $0.88 | | | | | | | | | | | | | |
| 24 | | | 1.06 | | | | | | 0.88 | | | | | | | | $4.00 | | | | | |
| 25 | | $1.62 | 1.06 | S | | | | $1.20 | 0.88 | | | | | | | | | | | | | |
| 26 | | 1.62 | S | $1.12 | | | | 1.20 | S | | | | | | | | | | | | $0.60 | |
| 27 | | S | | 1.12 | $2.50 | | | S | 0.88 | | | $2.50 | | | | | 6.50 | | | | | |
| 28 | | 1.50 | | 1.12 | 2.50 | | | 1.20 | 0.88 | | | 3.00 | S | | | | 4.75 | | $1.62 | | | |
| 29 | | 1.50 | 1.50 | 1.12 | 2.12 | S | $4.75 | | 1.00 | | | S | $1.88 | | $1.00 | | | | | | 1.00 | |
| 30 | | 2.00 | 1.50 | 1.38 | 2.12 | | 4.75 | | 1.00 | | | 3.00 | 2.00 | | 1.00 | | | | 2.00 | $3.25 | | |
| October | | | | | | | | | | | | | | | | | | | | | | |
| 1 | $2.88 | 2.25 | 1.50 | 2.00 | S | $3.25 | 4.75 | 2.50 | 2.38 | S | | 3.00 | 2.00 | | 1.00 | S | 4.00 | | 2.00 | 2.75 | | |
| 2 | 2.29 | 2.25 | 1.50 | S | 3.00 | 3.25 | 2.00 | 2.00 | 2.00 | | | 3.00 | 2.50 | | S | | | | 2.88 | 2.75 | S | |
| 3 | 2.27 | 2.25 | S | 1.62 | 3.00 | 3.25 | 2.00 | 2.00 | S | | | 3.00 | 3.00 | S | 0.75 | | | | 3.25 | S | 0.75 | |
| 4 | 2.27 | S | 2.50 | 1.62 | 3.00 | 2.75 | 2.38 | S | 2.19 | $3.25 | | 3.00 | 3.00 | | 0.75 | | 4.50 | $2.25 | S | 2.25 | | |
| 5 | 1.91 | 2.75 | 2.50 | 1.38 | 3.50 | 2.00 | S | | 2.19 | 2.50 | | 3.00 | S | | 0.75 | | | S | 3.50 | 2.00 | | |
| 6 | 2.04 | 2.50 | 2.00 | 1.38 | 3.25 | S | 2.00 | | 1.38 | 1.75 | | S | 3.00 | | 0.75 | | 5.00 | 1.50 | | | | |
| 7 | 2.07 | 2.50 | 1.50 | 1.38 | 3.25 | | 2.00 | 2.25 | 1.62 | 1.50 | | 5.00 | 3.00 | | | $3.00 | S | | 3.00 | 1.50 | | |
| 8 | 2.06 | 2.12 | 1.50 | 1.38 | S | | 2.25 | 2.25 | 1.75 | S | | 5.00 | 3.00 | | | S | 4.75 | | 2.62 | 2.00 | | |
| 9 | 2.20 | 2.25 | 1.50 | S | 1.62 | 4.00 | 2.25 | 2.00 | 1.75 | 1.75 | | 5.25 | 3.00 | | S | 3.12 | | 2.12 | 2.38 | 2.25 | S | |
| 10 | 2.19 | 2.00 | S | 2.00 | 1.62 | 4.00 | 2.00 | 2.00 | S | 1.75 | | 5.75 | 3.00 | | 2.50 | | | 3.75 | 3.00 | | | |
| 11 | 1.98 | S | 2.75 | 2.00 | 2.75 | 2.75 | 2.00 | S | 2.00§ | 1.75 | | 3.75 | 3.00 | $4.50 | 2.50 | | 5.00 | 3.81 | S | | 2.25 | |
| 12 | 1.93 | 2.12 | 2.75 | | | 2.75 | S | | 2.00§ | | | H | S | H | H | H | H | S | H | H | H | |
| 13 | 1.87 | 2.12 | 2.50 | 1.25 | 3.00 | S | | 2.00 | | 1.25 | | S | H | 4.50 | 1.50 | 3.50 | 4.00 | H | 3.25 | | 1.50 | |
| 14 | 1.85 | 1.75 | 2.12 | 1.50 | 3.00 | 2.50 | 1.75 | 2.00 | 1.25 | 1.25 | | 2.62 | 3.00 | 4.50 | | 3.50 | S | 3.44 | 3.00 | | 1.25 | |
| 15 | 1.71 | 1.88 | 2.12 | 0.62 | S | 2.50 | 1.75 | 2.12 | 1.25 | S | $4.25 | 2.50 | | 3.00 | 1.50 | S | 3.50 | 3.56 | 3.00 | | 1.25 | |
| 16 | 1.65 | 1.75 | 2.50 | S | 2.25 | 2.25 | 1.62 | 2.00 | 1.25 | 1.50 | 4.25 | 3.75 | | 3.00 | S | 2.75 | | 3.69 | 2.75 | | S | |
| 17 | 1.69 | 1.75 | S | 2.00 | 2.25 | 2.25 | 1.38 | 2.00 | S | 1.50 | 4.25 | 3.38 | 2.25 | S | 2.50 | 2.75 | 3.75 | 3.69 | 1.50 | | 1.62 | |
| 18 | 1.59 | S | 2.12 | 2.00 | 2.25 | 2.00 | 1.38 | S | 1.25 | 1.50 | 4.25 | 3.38 | 2.25 | 2.75 | 2.50 | 2.75 | 3.50 | 2.81 | S | | 1.75 | |
| 19 | 1.48 | 2.00 | 2.12 | 2.00 | 2.38 | 1.50 | S | 1.50 | 1.25 | 1.25 | 4.25 | 3.38 | S | 2.75 | 2.50 | 2.75 | 3.00 | S | 2.12 | | 1.62 | |
| 20 | 1.53 | 2.00 | | 1.88 | 2.50 | S | 1.62 | 1.50 | 1.25 | 1.25 | 4.25 | S | 2.25 | 2.75 | 2.50 | 4.25 | 3.00 | 3.56 | | | 2.12 | |
| 21 | 1.56 | 1.88 | 3.00 | 1.75 | 2.12 | 1.75 | 1.62 | 1.12 | 1.25 | 1.25 | S | 2.88 | 2.25 | 2.75 | 2.50 | 4.25 | S | 3.00 | 2.50 | | 2.00 | |
| 22 | 1.51 | 2.00 | 3.00 | 1.50 | S | 1.75 | 1.62 | 1.12 | 1.25 | S | 4.25 | 2.88 | 2.50 | 4.00 | 2.50 | S | 4.00 | 3.50 | 2.50 | | 2.25 | $2.25 |
| 23 | 1.54 | 2.00 | 3.00 | S | 2.00 | 1.83 | 1.50 | 1.12 | 1.25 | 1.75 | 4.25 | 2.88 | 2.50 | 4.00 | S | 3.25 | | 3.88 | 2.50 | | S | |
| 24 | 1.55 | 2.00 | S | 2.25 | 2.00 | 1.50 | 1.50 | 1.25 | S | 1.75 | 4.25 | 3.25 | 2.50 | S | 3.00 | 3.25 | | 3.00 | 2.50 | | 1.50 | |
| 25 | 1.52 | S | 3.00 | 2.25 | 2.00 | 2.25 | 1.50 | S | 1.50 | 1.50 | 4.25 | 2.75 | 2.50 | 3.00 | 3.00 | 3.00 | 3.50 | 3.00 | S | | 2.38 | |
| 26 | 1.58 | 1.62 | 3.00 | 2.50 | 3.00 | 2.25‡ | S | 1.00 | 1.50 | 1.50 | 4.00 | 2.75 | S | 3.00 | 2.75 | 3.00 | 4.50 | S | 2.50 | | 2.62 | |
| 27 | 1.63 | 1.62 | 3.00 | 2.50 | 3.00 | S | | | 1.50 | 1.50 | 4.00 | S | | 3.50 | 3.00 | 3.75 | 4.25 | 2.50 | 2.50 | | 2.50 | |
| 28 | 1.63 | 1.25 | 2.25 | 2.50 | 2.62 | 2.25‡ | | 1.50 | 1.81 | 1.50 | S | 2.44 | | 3.50 | 3.00 | 3.75 | S | 2.50 | 3.00 | 2.88‡ | 2.50 | |
| 29 | 1.74 | 1.50 | 2.50 | 3.25 | S· | 2.25‡ | | 1.38 | 1.81 | S | 4.50 | 2.44 | | 4.50 | 3.00 | S | 3.25 | 3.00 | 3.00 | 3.25‡ | 2.75 | |
| 30 | 1.91 | 2.00 | 2.50 | S | 3.00 | | | 1.56 | 1.81 | 1.75 | 4.50 | 1.78 | | 4.50 | S | 3.00 | | 3.00 | 3.25 | 3.12‡ | S | |
| 31 | 1.89 | 2.00 | S | 3.25 | 3.00 | | | 1.44 | S | 1.75 | 4.12‡ | 1.62 | | S | 3.75 | 3.00 | 3.50 | 4.00 | 4.00 | S | 3.00 | 4.00 |

| November | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2.03 | S | 1.50‡ | 3.25 | 3.00 | 4.00‡ | 3.00‡ | S | 1 81 | 1.75 | 2 75 | 1.62 | ..... | 4.50 | 3.75 | 4.38§ | 2.38 | 3.50 | S | 1.88 | 3.00 | 3.75 |
| 2 | 1.90 | 1.50 | ..... | 2.50 | 2.81 | 4.00‡ | S | 1.19 | H | 1 75 | 3.00 | 1.62 | S | H | 3.75 | ..... | 3.00 | S | 4.00 | ..... | 3.00 | 3.00 |
| 3 | 1.90 | ..... | 2.00‡ | 2.50 | 2.81 | S | 3.25‡ | H | 1.81 | 1.50 | 3.00 | S | ..... | 4 50 | 4.25 | 4.25§ | ..... | 3.00 | H | ..... | 3.00 | 2.75 |
| 4 | 1.79 | 1.88 | 2.00‡ | 2.00 | 2.81 | 3.75‡ | H | 1.19 | 2.00 | 1.50 | S | 1 88 | ..... | 4.50 | 4.25 | ..... | S | H | 3.75 | ..... | 3.25 | S |
| 5 | 1.79 | 1.75 | 2.00‡ | 2.00 | S | H | 2.00 | 1.25 | 2.19 | S | 2.75 | H | ..... | 2.50 | 4.00 | S | 3.25 | 3.50 | 4.25 | ..... | 2.75 | 3.12 |
| 6 | 1.80 | 1.75 | 1.67‡ | S | 2.81 | 3.75‡ | 2.00 | 1.31 | 2.19 | 2.00 | H | 4.00 | ..... | 2.50 | S | 3.38§ | H | 3.00 | 5.00 | ..... | S | ..... |
| 7 | 1.63 | 1.75 | S | 2.00 | H | 2.38‡ | 2.00 | 1.38 | S | ..... | 2.38 | 2.50 | ..... | S | 4.00 | H | 4.00 | 2.88 | 3.25 | ..... | 3.25 | 4.00 |
| 8 | 1.65 | S | 1.67‡ | H | 2.87 | 2.62‡ | 2.00 | S | 2.19 | 2.00 | 2.50 | 2.19 | ..... | 3.50 | H | 4.15§ | ..... | 2.50 | S | ..... | H | 3.50 |
| 9 | ..... | 1.75 | 1.67‡ | 2.00 | ..... | 2.62‡ | S | 1 19 | 2.19 | 1.75 | 2.50 | 2.62 | ..... | 3.50 | 4.00 | 4.15§ | 5.50 | S | 3.00 | ..... | 2.75 | 3.50 |
| 10 | ..... | 1.75 | ..... | ..... | ..... | S | 2.00 | 1.19 | 2.19 | 1.75 | 2 00 | S | ..... | 3.50 | 4.50 | 3.88§ | 5.75 | 2.75 | ..... | ..... | 2.50 | 2 62 |
| 11 | ..... | 1.75 | ..... | ..... | ..... | 2.00‡ | 2.00 | 1.19 | 1.75 | 1.75 | S | 3.00 | ..... | 3.50 | ..... | 3.88§ | S | ..... | 3.00 | ..... | ..... | S |
| 12 | ..... | 1.75 | ..... | ..... | ..... | 2.00‡ | 2.00 | 1.19 | 1.75 | S | 1.50 | 3.00 | ..... | 3.50 | 5.00 | S | 4.50 | 3.50 | 3.00 | ..... | 2 00 | 3.00 |
| 13 | ..... | 1.75 | ..... | ..... | ..... | 2.00‡ | 3.00 | 1.19 | 1.75 | 2.50 | 1.50 | 3.00 | ..... | 3.50 | S | 3.50 | ..... | 3.00 | 3.25 | ..... | S | 3.00 |
| 14 | ..... | 1.75 | ..... | ..... | ..... | ..... | 3.00 | 1.19 | S | 2.50 | 1.50 | ..... | ..... | S | 5.25 | 3.50 | 5.00 | 3.50 | 3.12 | ..... | 2.75 | 3.75 |
| 15 | ..... | S | ..... | ..... | ..... | 2.00‡ | 3.00 | S | 1.75 | 3.62 | 1.50 | ..... | ..... | 3.50 | 5.25 | 5.50 | 4.75 | 3.25 | S | ..... | ..... | 3.62 |
| 16 | ..... | 1.75 | ..... | ..... | ..... | 2.00‡ | S | 1.19 | 1.75 | 3.50 | 1.50 | ..... | ..... | 3.50 | ..... | 5.50 | 4.50 | S | 2.75 | ..... | ..... | ..... |
| 17 | ..... | 1.75 | ..... | ..... | ..... | S | ..... | 1.19 | 1.75 | 3.50 | 1.50 | S | ..... | 3.50 | 4.50 | 4.75 | 4.50 | 3.00 | ..... | ..... | ..... | ..... |
| 18 | ..... | 1.75 | ..... | ..... | ..... | ..... | ..... | 1.19 | 1.75 | 3.50 | ..... | ..... | ..... | 3.50 | ..... | 4.75 | S | ..... | 1.50 | ..... | ..... | ..... |
| 19 | ..... | 1.75 | 2.17‡ | ..... | ..... | ..... | ..... | 1.19 | 1.75 | S | ..... | ..... | ..... | 3.50 | 4.00 | S | 3.75 | ..... | 1.50 | ..... | ..... | 3.38 |
| 20 | ..... | 2.00† | 2.17‡ | S | ..... | ..... | ..... | 1.69 | 1.75 | 3.50 | ..... | ..... | ..... | 3.50 | S | 6.25 | 3.75 | 4.25 | ..... | ..... | ..... | ..... |
| 21 | ..... | 2.00† | S | ..... | ..... | ..... | ..... | 1.69 | S | 3.50 | ..... | ..... | ..... | S | 4.00 | 6.00§ | 5.00 | 5.50 | 2.25 | ..... | ..... | ..... |
| 22 | ..... | S | 2.17‡ | ..... | ..... | ..... | ..... | ..... | ..... | 3.50 | ..... | ..... | ..... | 3.50 | ..... | 5.50 | ..... | 4.25 | S | ..... | ..... | 3.50 |
| 23 | ..... | 2.00† | 2.17‡ | ..... | ..... | ..... | ..... | ..... | ..... | 3.50 | ..... | ..... | ..... | ..... | ..... | 7.50§ | 6.00 | S | ..... | ..... | ..... | ..... |
| 24 | ..... | 2.00† | 2.17‡ | ..... | ..... | ..... | ..... | ..... | ..... | 3.50 | ..... | ..... | ..... | ..... | ..... | 5.50§ | 6.00 | 3.75 | 1.88 | ..... | ..... | 2.38 |
| 25 | ..... | 2.00† | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 3.50 | ..... | ..... | ..... | ..... | 3.50 | 5.50§ | S | ..... | ..... | ..... | ..... | ..... |
| 26 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 2.75 |

*When the date falls on Sunday, the average of Saturday and Monday is used. Quotations per half-barrel basket and per large basket apparently are for 40 quarts, and may be converted to a 32-quart basis by multiplying by 80. In finding the 1910–1914 average this was done.

† Virginia and North Carolina peas.

‡ Half-barrel basket. 1910, October 1 thru November 9. 1911, October 5, 6, 7, and 11, thru October 20; also October 26 thru November 8.

§ Per large basket.

‖ Virginia and Maryland peas.

¶ Norfolk peas.

TABLE 78. AVERAGE DAILY WHOLESALE PRICES OF VIRGINIA PEAS IN NEW YORK CITY, SPRING CROP, PER 32-QUART BASKET
(H = holiday, S = Sunday)

| Month and day | Five-year average, 1910–1914* | 1908 | 1909 | 1910§ | 1911§ | 1912† | 1913§ | 1914¶ | 1915¶ | 1916 | 1917¶ | 1918¶ | 1919¶ | 1920¶ | 1921 | 1922 | 1923 | 1924 | 1925 | 1926 | 1927 | 1928 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| May | | | | | | | | | | | | | | | | | | | | | | |
| 1 | | | | | | | | | | $1.62 | | | | | | | | | | | | |
| 2 | | | | $1.12 | | | | | | 1.62 | | | | | $2.75 | | | | | | | |
| 3 | | | | 1.12 | | | | | | 2.00 | | | | | 2.25 | | | | | | | |
| 4 | | | | 1.12 | | | | | | 2.00 | | | | | 2.25 | $3.62§ | | | | | | |
| 5 | | | | 1.12 | | | $2.00 | | | 2.00 | | | $2.50 | | 2.25 | 3.00§ | | | | | | |
| 6 | | | $0.80 | 1.12 | | | 2.00 | | | 2.00 | | | 2.50 | | 2.25 | | | | | | | |
| 7 | | $2.00† | 0.80 | 1.25 | S | | 4.25 | | | S | | | | | 2.25 | | | | | | | |
| 8 | | 1.88† | 0.75 | S | | | 2.50 | | | 2.00 | | | | | S | 3.25§ | | | | | | |
| 9 | | 1.75† | S | 1.62 | | | 2.38 | | | 2.00 | | | | | 2.25 | 1.25§ | | | | | | |
| 10 | | S | 0.88 | 1.62 | | | 2.38 | S | | 1.94 | | | | | 2.25 | 2.25§ | | | | | | |
| 11 | | 1.88† | 0.88 | 1.56 | | | S | | | 2.12 | | | | | 2.25 | 2.88§ | $4.00 | | | | | |
| 12 | | 1.88† | 1.38 | 1.38 | | | 1.94 | | $2.44 | 1.75 | | | | | 2.25 | 2.69§ | 4.00 | $1.45 | | | $2.25 | |
| 13 | | 1.62 | 1.38 | 1.12 | | $0.88 | 1.94 | | 1.81 | 1.81 | | | | | 2.25 | 3.25§ | S | | | | | |
| 14 | | 1.12 | 1.12 | 1.19 | S | 0.88 | 1.94 | | 1.75 | S | | | 4.25 | | 1.69 | S | 2.38 | 1.25** | $2.38 | | 1.38 | |
| 15 | | 1.25 | 1.03 | S | $1.25 | 1.50 | 1.50 | | 1.69 | 1.81 | | | 4.75 | | S | 3.00§ | | 1.50** | 3.00 | | S | |
| 16 | | 1.12‡ | S | 1.25 | 1.25 | 1.50 | 1.44 | | S | 1.81 | | $2.19 | 4.50 | S | 1.56 | 2.12 | | | 3.00 | | 1.38 | $1.25 |
| 17 | | S | 1.00 | 1.38 | 2.00 | 1.50 | 1.44 | S | 1.38 | 2.50 | | 2.50 | 3.94 | | 1.50 | 2.38 | 2.00 | | S | | 1.25 | 1.50 |
| 18 | $1.21 | 1.08 | 1.00 | 1.59 | 1.62 | 1.06 | S | $2.62 | 1.38 | 2.25 | | 2.38 | S | $4.00 | 1.38 | 3.25§ | | | 2.38 | | 1.75 | 1.38 |
| 19 | 1.18 | 1.08 | 1.13 | 1.50 | 1.25 | S | 1.81 | 2.62 | 1.06 | 2.25 | | S | 3.75 | | 2.62 | 2.12 | | | 2.38 | $2.25 | 2.50 | 1.62 |
| 20 | 1.09 | 0.88 | 0.81 | 1.75 | 1.00 | 1.12 | 1.81 | 1.94 | 1.06 | 1.81 | S | 1.88 | 3.50 | | 2.62 | 2.12 | S | | 3.38†† | 2.00 | 2.12 | S |
| 21 | 1.17 | 0.75 | 0.69 | 1.56 | S | 1.12 | 2.38 | 1.88 | 1.06 | S | $2.19 | 2.00 | 3.12 | | 2.25 | S | 1.75 | | 2.88†† | 2.00 | 1.75 | 1.50 |
| 22 | 1.22 | 0.52 | 0.72 | S | 1.50 | 1.38 | 2.31 | 1.75 | 1.00 | 1.81 | 2.19 | 2.00 | 3.75 | 3.00 | S | 2.12 | | | 2.50†† | 1.50 | S | |
| 23 | 1.10 | 0.48 | S | 1.50 | 1.50 | 1.25 | 1.94 | 1.44 | S | 1.81 | 2.62 | 1.25 | 3.00 | S | 1.88 | 2.62§ | 1.81 | | 1.88† | S | 1.88 | 1.50 |
| 24 | 1.19 | S | 0.94 | 1.50 | 2.06 | 1.31 | 1.94 | S | 1.19 | 1.88 | 2.12 | 1.25 | 2.31 | 2.88 | 1.88 | 3.38§ | 1.75 | | S | 1.62 | 1.50 | 1.50 |
| 25 | 1.07 | 0.45 | 1.00 | 1.21 | 1.50 | 1.31 | S | 1.44 | | 1.88 | 1.81 | 1.25 | S | 2.75 | 1.88 | 3.12§ | 2.00 | S | 2.00 | 1.75 | 1.62 | 1.19 |
| 26 | 0.95 | 0.55 | 1.00 | 0.91 | 1.21 | S | 1.81 | 1.44 | 1.50 | 2.62 | 1.44 | S | 2.50 | 2.75 | 1.88 | 2.38§ | 2.00 | 1.50 | 2.25† | 2.00 | 1.38 | 0.62‡‡ |
| 27 | 0.93 | 0.55 | 0.81 | 0.90 | 1.21 | 1.06 | 1.81 | 1.44 | 1.19 | 2.31 | S | 1.38 | 2.06 | 2.88 | 1.88 | 2.25§ | S | | 2.12 | 1.50†† | 1.25 | S |
| 28 | 0.88 | 0.55 | 0.75 | 0.96 | S | 1.06 | 1.75 | 1.06 | 1.19 | S | 1.31 | 1.38 | 2.06 | 3.69 | 1.56 | S | 1.31 | 2.25 | 3.50 | 1.50†† | 1.25 | 0.62‡‡ |
| 29 | 0.91 | 0.55 | 0.69 | S | 1.21 | 1.38 | 1.69 | 0.88 | 1.19 | 1.81 | 1.50 | 1.44 | 3.62 | 3.50 | S | 1.50§ | 1.31 | 2.12 | | 1.19†† | S | |
| 30 | | H | S | H | H | H | H | H | S | H | H | H | H | S | H | H | H | H | H | S | H | H |
| 31 | 0.80 | S | H | 0.94 | 1.25 | 1.31 | 1.12 | S | H | 1.81 | 1.38 | 1.06 | 2.88 | H | 1.75 | 2.62§ | 1.50 | 1.38 | S | H | 1.75 | 1.12‡‡ |

| June | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | ..... | 0.55† | 0.69 | 0.84 | 1.19 | 1.31 | S | 0 61 | 1.25 | 1.50 | 1.25 | 1.06 | S | 3.12 | 1.44 | 2 31§ | 1.25 | S | 1.62‖ | 1.50†† | 2.12 | 1.38‡‡ |
| 2 | ..... | 0.55† | 0.38‡ | 0.81 | 1.00 | S | 1.06 | 0.56 | 1.50 | 1.31 | 0.94 | S | 2.62 | 2.88 | 1.44 | 2.12§ | 1.38 | 1.50 | 1.38‖ | 1.75†† | 2.25 | 1.25‡‡ |
| 3 | ..... | 0.55† | ..... | 0.69 | 0.88 | 1.31 | 1.09 | 0.75 | 1.50 | 1.31 | S | 1.06 | 2.62 | 2.94 | 1.38 | 2.12§ | S | 2.00 | 1.50‖ | 1.50† | 2.38 | S |
| 4 | ..... | 0.55† | ..... | 0.69 | S | 1.06 | 1.00 | 0.81 | 1.50 | S | 0.91 | 1.06 | 2.25 | 2.88 | 1 38 | S | 0.88 | 2 12 | 1.12‖ | 1.50† | 2.62 | 1.25‡‡ |
| 5 | ..... | 0.55† | ..... | S | 0.88 | 1.00 | 1.00 | 0.81 | 1.50 | 1.50 | 0.91 | 1.06 | 1.88 | 3.12 | S | 1.56§ | 1.38 | 2.38 | 1.12‖ | 1.12† | S | ..... |
| 6 | ..... | 0.55† | S | 0.69 | 0.88 | 1.00 | 1.00 | 0.81 | S | 1.50 | 0.93 | 1.06 | 1.62 | S | 1.38 | ..... | 1.12 | 2.25 | 1.00‖ | S | 2.38 | 1.12 |
| 7 | ..... | S | 0.50 | 0.75 | 0.88 | 0.88 | 1.00 | S | 1.44 | 1.56 | 1.00 | 1.06 | 1.44 | 3.00 | 1.38 | ..... | 1.00 | 1.75 | S | 1.38† | 3.25 | 1.00 |
| 8 | ..... | 0.55† | 0.50 | 0.75 | 0.88 | 0.88 | S | 0.81 | 1.12 | 1.38 | 0.88 | 1.06 | S | 3.00 | 1.38 | 1.06§ | 0.88 | S | 1.00‖ | 1.12† | 3.00 | 0.88 |
| 9 | ..... | ..... | 0.50 | 0.75 | 0.88 | S | 1.12‖ | 0.81 | 0.75 | 1.38 | 0.88 | S | ..... | 3.00 | 1.38 | 1.06§ | 0.88 | 1.38 | ..... | 1.75† | 1.88 | 0.88 |
| 10 | ..... | ..... | 0 50 | 0.75 | 0.88 | 0.88 | 1.06‖ | 0 69 | 0.50 | 1.25 | S | 1.06 | ..... | 2 88 | 1.50 | ..... | S | 1.88 | ..... | 1.88† | 2.00 | S |
| 11 | ..... | ..... | 0.50 | 0.75 | S | ..... | 1.12‖ | 0 69 | 0.44 | S | 0.88 | ..... | 1.12 | 2.44 | 1.50 | S | 0.88 | ..... | 0.50‖ | 2.50† | ..... | 1.25 |
| 12 | ..... | ..... | ..... | ..... | ..... | ..... | 1.12‖ | 0.55 | 0.44 | 1.25 | 0.88 | ..... | 1.12 | 1.75 | S | ..... | ..... | 3.50 | ..... | 2.62† | S | 1.25 |
| 13 | ..... | ..... | ..... | ..... | ..... | ..... | 1.12‖ | 0.55 | S | 1.00 | 0.88 | ..... | 1.12 | S | 1.50 | ..... | ..... | 3.00 | ..... | S | 1.38 | 1.50 |
| 14 | ..... | ..... | ..... | ..... | ..... | ..... | 1.12‖ | S | 0.50 | 1.00 | 0.81 | ..... | 1.00 | 1.62 | ..... | ..... | ..... | 2.62 | ..... | 2.38† | 0.75 | 1.00 |
| 15 | ..... | ..... | ..... | ..... | ..... | ..... | S | 0.55 | ..... | 0.94 | 0.69 | ..... | S | 1.62 | ..... | ..... | ..... | S | ..... | ..... | ..... | ..... |
| 16 | ..... | ..... | ..... | ..... | ..... | ..... | 1.12‖ | 0.55 | ..... | 0.94 | 0.28 | S | 0.75 | 1.25 | ..... | ..... | ..... | 1.88 | ..... | ..... | ..... | ..... |
| 17 | ..... | ..... | ..... | ..... | ..... | ..... | 1.12‖ | 0.55 | ..... | 1.00 | S | ..... | 0 75 | 1.06 | ..... | ..... | S | 2.38 | ..... | ..... | ..... | ..... |
| 18 | ..... | ..... | ..... | ..... | ..... | ..... | 1.12‖ | ..... | ..... | S | 0.28 | ..... | 0.75 | 1.19 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 19 | ..... | ..... | ..... | ..... | ..... | ..... | 1.03‖ | ..... | ..... | 1.00 | 0.28 | ..... | 0.75 | 1.19 | ..... | ..... | ..... | 2.25 | ..... | ..... | ..... | ..... |
| 20 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1.00 | 0.28 | ..... | 0.75 | ..... | ..... | ..... | ..... | 2.00 | ..... | ..... | ..... | ..... |
| 21 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1.00 | 0.28 | ..... | 0.75 | 1.19 | ..... | ..... | ..... | 1.75 | ..... | ..... | ..... | ..... |
| 22 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1.00 | 0.30 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 23 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1.00 | 0.44 | S | 0.75 | ..... | ..... | ..... | ..... | 1.75 | ..... | ..... | ..... | ..... |
| 24 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1.00 | S | ..... | 0.75 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 25 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | S | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 26 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 0.75 | ..... | ..... | ..... | ..... | 1.25 | ..... | ..... | ..... | ..... |
| 27 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1.25 | ..... | ..... | ..... | ..... |
| 28 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 29 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 30 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |

* When the date falls on Sunday, the average of Saturday and Monday is used. Quotations per half-barrel basket, per 5-peck basket, and per large basket, apparently are for 40 quarts and may be converted to a 32-quart basis by multiplying by 80. In finding the 1910–1914 average this was done.

† Norfolk peas.

‡ Small, per basket.

§ Per half-barrel basket. 1910, 1911, 1913, May 1 thru June 7.

‖ Eastern Shore peas.

¶ Per large basket. 1914, 1915, 1917, 1918, May 18 thru June 11. 1919, 1920, May 14 thru June 7.

** Per 5-peck basket.

†† Average of best and poor to fair, per basket.

‡‡ Per bushel basket.

(H = holiday, S = Sunday)

| Month and day | 1908 | 1909 | 1910 | 1911 | 1912 | 1913 | 1914 | 1915 | 1916 | 1917 | 1918 | 1919 | 1920 | 1921 | 1922 | 1923 | 1924 | 1925 | 1926 | 1927 | 1928 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| May | | | | | | | | | | | | | | | | | | | | | |
| 18 | | | | | | | | | | | | | | $3.38 | | | | | | | |
| 19 | | | | | | | | | | | | | | 3.50 | | | | | | | |
| 20 | | | | | | | | | | | | | | 3.75 | | | | | | | |
| 21 | $0.88 | $1.56 | | | | | | | | | | | | 3.25 | | | | | | | |
| 22 | 0.75 | 1.56 | | | | | | | | | | | | | | | | | | | |
| 23 | 0.62 | S | | | | | | | | | $2.19† | | | 3.00 | | | | | | $2.12 | |
| 24 | S | 1.69 | | | | | | $1.09 | | | 1.81† | | | 2.75 | | | | | | | |
| 25 | 0.75 | 1.69 | | | | | | 1.44 | | | 1.81† | | | 2.75 | $5.38 | | | | | 1.38 | |
| 26 | 1.38 | 1.69 | | | | | | 1 62 | | | | | | 2.75 | 4.00 | | | | | | |
| 27 | 1.12 | 1.44 | | | | | $1.17‖ | 1.50 | | | 1.88† | $2.25 | | 2.50 | 2.12 | S | | $3.62 | | 1.75 | |
| 28 | 1.00 | 1.31 | | | | | 0.83‖ | 1.50 | | | 1.88† | 2.56 | | 2.00 | S | | | 3.25 | | | |
| 29 | 1.18 | 1.62 | | | | | 0.67‖ | 1.56 | $2.31 | | 1.88† | 3.56 | | S | 2.62 | | | 2.50 | | | |
| 30 | | | | | | | | | | | | | | | | | | | | | |
| 31 | | | | | $2.38‡ | | | | 2.25 | $1.44 | 1.69† | 3.19 | | 2.00 | 2.62 | | | | | 1.88 | $1.75 |
| June | | | | | | | | | | | | | | | | | | | | | |
| 1 | 1.12 | 1.62 | | $1.44 | 2.06 | S | 1.50 | 1.62† | 2.06 | 1.56 | 1.62† | S | $3.12 | 1.88 | 2.25 | | | 1.88 | $1.88 | | 1.88 |
| 2 | 1.25 | 1.56 | | 1.25 | S | | 1.62 | 1.62† | 1.81 | 1.25 | S | 2.88 | 2.88 | 1.88 | 2.00 | $1.50 | | 1.88 | 1.88 | | 2.12 |
| 3 | 1.25 | 1.31 | | 1.22 | 2.06 | | 1.38 | 1.75† | 1.94 | S | 1.81† | 2.94 | 2.88 | 1.88 | 2.25 | S | | 1.75 | 1.88¶ | | S |
| 4 | 0.88 | 1.22 | | S | 1.94 | | 1.38 | 1.75† | S | 1.44 | 1.81† | 2.38 | 2.88 | 1.75 | S | 1.50 | $3.00 | 1.12 | 1.81¶ | | 2.00 |
| 5 | 0.88 | 1.09 | S | 1.25 | 1.75 | | 1.50 | 1.75† | 2.00 | 1.31 | 1.75† | 1.69 | 2.88 | S | 2.38 | 1.62 | 3.38 | 1.38 | 1.75¶ | | 2.50 |
| 6 | 0.88 | S | | 1.25 | 1.69 | | 1.38 | S | 2.12† | 1.38 | 1.75† | 1.56 | S | 2.38 | 2.50 | 2.00 | 3.38 | 1.25 | S | | 2.50 |
| 7 | S | 1.16 | | 1.47 | 1.56 | | S | 1.31† | 1.88† | 1.44 | 1.81† | 1.31 | 3.12 | 2.50 | 1.50 | 1.62 | 3.25 | S | 1.81¶ | | 2.50 |
| 8 | 0.88 | 1.06 | | 1.25 | 1.56 | S | 1.25 | 1.12† | 1.94† | 1.38 | 1.81† | S | 3.12 | 2.50 | 0.88 | 1.75 | S | 1.62 | | | 2.38 |
| 9 | 0.82 | 0.84 | | 1.34 | S | | 1.18 | 0.84† | 1.94† | 1.31 | S | 1.31 | 3.06 | 2.38 | 0.88 | 1.69 | 2.38 | 1.50 | 2.38¶ | | 2.00 |
| 10 | 0.88 | 1.12 | | 1.34 | 1.56 | | 1.00 | 0.75† | 1.56† | S | 1.81† | 1.56 | 3.00 | 2.38† | 0.88 | S | 2.50 | 1.12 | 2.69¶ | | S |
| 11 | 0.88 | 1.12 | | S | 1.50 | | 0.94 | 0.66† | S | 1.31† | 1.81† | 1.19 | 2.62 | 1.75† | S | 1.75 | 3.38 | | 3.31¶ | 1.88† | 1.88 |
| 12 | 1.00 | 1.12 | S | 1.44 | 1.50§ | | 0.81 | 0.64† | 1.50† | 1.31† | 1.69† | 1.25 | 1.88 | S | | 2.62 | 4.25 | | 3.31¶ | S | 1.88 |
| 13 | 1.00 | S | $1.12† | 1.38 | 1.50§ | | 0.81 | S | 1.12† | 1.12† | 1.69† | 1.12 | S | 1.75† | | 2.62 | 3.25 | | S | 1.69† | |
| 14 | S | 1.12 | 1.09† | 1.38 | 1.50§ | | 0.81 | 0.70† | 1.12† | 1.09† | 1.44† | 1.12 | 1.75 | 1.50† | | 3.00 | 3.00 | | 3.06¶ | | 1.88 |
| 15 | 0.94 | 1.12 | 0.90† | 1.12 | 1.50§ | S | 0.81 | 0.62† | 1.00† | 1.00† | 1.44† | S | 1.75 | 1.50† | | 3.25 | S | 1.25 | | 1.62† | 1.38 |
| 16 | 0.94 | 1.16 | 0.88† | 1.31 | 1.50§ | | 0.81 | 0.44† | 1.06† | 0.65† | S | 1.25 | 1.44 | 1.50† | | 3.00 | 2.62 | | | 1.62† | 1.38 |
| 17 | 0.88 | 1.12 | 0.90† | 1.12 | 1.50§ | | 0.81 | 0.34† | 1.31† | S | 1.31† | 1.31 | 1.19 | 1.50† | | S | | | | 1.25† | S |
| 18 | | 1.12 | 0.90† | 1.12 | 1.50§ | | 0.62 | 0.29† | S | 0.65† | 1.31† | 1.31 | 1.38 | 1.50† | S | 3.00 | 2.25 | | 2.94¶ | 0.55† | 1.12 |
| 19 | | 0.94 | 0.90† | 1.12 | 1.50§ | | 0.50 | 0.26† | 1.31† | 0.65† | 1.25† | 1.62 | 1.31 | S | | | 2.38 | | 2.94¶ | S | 1.25 |
| 20 | | S | 0.90† | 1.12 | | | 0.62 | S | 1.31† | 0.65† | 1.25† | 1.62 | S | 1.50† | | 3.25 | 2.25 | | | 1.50† | 0.75 |
| 21 | | 0.94 | 0.75† | 1.12 | | | S | 0.26† | 1.31† | 0.65† | 1.25† | 1.62 | 1.31 | | | 3.25 | 2.00 | | | | 0.80 |
| 22 | | 0.94 | 0.75† | 1.12 | | | 0.62 | 0.35† | 1.31† | 0.65† | 1.25† | S | 1.38 | | | 3.50 | S | | | | |
| 23 | | 0.94 | 0.75† | 1.12 | S | | 0.62 | 0.35† | 1.31† | 0.88† | S | 1.38 | 1.38 | | | 3.62 | 1.75 | | | | |
| 24 | | | 0.75† | | | | | 0.35† | 1.31† | S | 1.25† | 1.38 | 1.25 | | | S | | | | | |
| 25 | | | 0.75† | | | | | 0.31† | S | 0.88† | | | 1.25 | | | 3.62 | | | | | |
| 26 | | | | | | | | 0.31† | 1.31† | 0.97† | | 1.38 | 1.19 | | | | 1.00 | | | | |
| 27 | | | | | | | | | 1.31† | 0.88† | | 1.38 | | | | | 1.00 | | | | |
| 28 | | | | | | | | | 1.31† | 0.75† | | 1.38 | | | | | | | | | |
| 29 | | | | | | | | | 1.12† | 0.75† | | | | | | | | | | 1.62 | |
| 30 | | | | | | | | | 1.06† | 0.75† | | | | | | | | | | 1.25 | |
| July | | | | | | | | | | | | | | | | | | | | | |
| 1 | | | | | | | | | 1.06† | | | | | | | | | | | | |
| 2 | | | | | | | | | | 0.75† | | | | | | | | | | | |
| 3 | | | | | | | | | 1.06† | 0.65† | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | 1.06† | 0.65† | | | | | | | | | | | |
| 6 | | | | | | | | | 1.06† | 0.65† | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | | | |

| | | |

TABLE 80. AVERAGE DAILY WHOLESALE PRICES OF NEW JERSEY PEAS IN NEW YORK CITY, PER 28-QUART BASKET
(H = holiday, S = Sunday)

| Month and day | Five-year average, 1910–1914* | 1908 | 1909 | 1910 | 1911 | 1912 | 1913 | 1914 | 1915 | 1916 | 1917 | 1918 | 1919 | 1920 | 1921 | 1922 | 1923 | 1924 | 1925 | 1926 | 1927 | 1928 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| May | | | | | | | | | | | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | | | | $5.50 | | | | | | | |
| 21 | | | | | | | | | | | | | | | 4.75 | | | | | | | |
| 22 | | | | | | | | | | | | | | | S | | | | | | | |
| 23 | | | | | | | | | | | | | | | 4.50 | | | | | | | |
| 24 | | | | | | | | | | | | | | | 4.50 | | | | | | | |
| 25 | | | | | | | | | | | | | | | 4.50 | | | | | | | |
| 26 | | | | $1.44 | | | | | | | | | | | 3.75 | | | | | | | |
| 27 | | | | 1.50 | | | | | | | | $2.88 | $3.50 | | 3.50 | $4.50 | S | | $3.06‡ | | | |
| 28 | | | | 1.50 | | | | | | | | 2.62 | 3.50 | | 2.75 | S | | | 3.12‡ | | | |
| 29 | | | | | | | | | | | | 2.38 | 3.75 | | S | 4.50 | | | 2.50‡ | | | |
| 30 | | | | | | | | | | | | 2.06 | | | | | | | | | | |
| 31 | | | | 1.50 | | | | | | | | | 2.94 | S | 3.00 | 3.12 | $2.25 | | | | | |
| June | | | | | | | | | | | | | | | | | | | | | | |
| 1 | $1.80 | $1.38 | $1.62 | 1.38 | $1.50 | $2.00 | $2.12 | $2.00 | $1.75 | | | 2.06 | S | | 2.62 | 3.00 | 2.12 | S | 2.19‡ | | | |
| 2 | 1.81 | 1.50 | 1.50 | 1.38 | 1.56 | 2.00 | 2.12 | 2.00 | 1.75 | | | S | 3.25 | | 2.50 | 3.00 | 2.00 | | 2.00‡ | | | |
| 3 | 1.69 | 1.25 | 1.56 | 1.25 | 1.38 | 2.00 | 2.00 | 1.81 | 1.75 | $2.19 | S | 1.88 | 3.75 | | 2.12 | 3.00 | S | | 2.00‡ | $2.62 | $4.25 | |
| 4 | 1.56 | 1.08 | 1.25 | 1.25 | 1.34 | 2.00 | 1.69 | 1.50 | 1.75 | S | | 2.00 | 2.88 | | 2.12 | S | 2.00 | | 2.00‡ | 2.62 | 4.50 | |
| 5 | 1.46 | 0.88 | 1.12 | 1.25 | 1.31 | 1.94 | 1.38 | 1.44 | 1.75 | 2.25 | | 1.94 | 1.75 | | S | 2.88 | 2.25 | | 1.88‡ | 2.50 | S | |
| 6 | 1.36 | 0.88 | S | 1.25 | 1.31 | 1.69 | 1.38 | 1.19 | S | 2.44 | | 1 81 | 1.69 | S | 2.50 | 2 25 | 2.50 | | 1.72‡ | S | 3.75 | $3.25 |
| 7 | 1.43 | S | 1.31 | 1.31 | 1.56 | 1.69 | 1.38 | 1.19 | 1.56 | 2.12 | $2.25 | 2.00 | 1.50 | $3.62 | 2.50 | 2.12 | 2.50 | | S | 2.50 | 3.75 | 3.25 |
| 8 | 1.38 | 0.94 | 1.16 | 1.31 | 1.25 | 1.81 | 1.32 | 1.19 | 1.25 | 2.06 | 2.00 | 2.00 | S | 3.81 | 2.50 | 1.62 | 2.38 | S | 1.62‡ | 2.50 | 3.00 | 3.25 |
| 9 | 1.34 | 0.94 | 1.00 | 1.09 | 1.50 | 1.81 | 1.25 | 1.06 | 0.94 | 2.06 | 1.88 | S | 1.81 | 3.75 | 2.38 | 1.50 | 2.38 | | 1.38‡ | 2.75 | 3.00 | 2.38 |
| 10 | 1.34 | 0.94 | 1.25 | 1.09 | 1.62 | 1.81 | 1.19 | 1.00 | 0.81 | 1.75 | S | 2.00 | 1.88 | 3.44 | 2.44 | 1.62 | S | $4.25 | 1.31‡ | 2.88 | 2.50 | S |
| 11 | 1.37 | 0.94 | 1.25 | 1.09 | 1.66 | 1.75 | 1.34 | 1.00 | 0.80 | S | 2.00 | 2.00 | 1.62 | 2.50 | 2.06 | S | 2.88 | 5.25 | 1.20 | 3.25 | 2.38 | 2.25 |
| 12 | 1.33 | 1.18 | 1.25 | 1.17 | 1.69 | 1.62 | 1.34 | 0.81 | 0.75 | 1.62 | 1.69 | 1.81 | 1.62 | 2.00 | S | 1.38 | 3.00 | 5.25 | 1.25 | 3.50 | S | 2.38 |
| 13 | 1.33 | 1.25 | S | 1.25 | 1.62 | 1.62 | 1.34 | 0.81 | S | 1.19 | 1.62 | 1.81 | 1.25 | S | 2.00 | 1.75 | 3.00 | 5.25 | 1.25 | S | 2.12 | 2.25 |
| 14 | 1.31 | S | 1.25 | 1.18 | 1.62 | 1.62 | 1.34 | 0.78 | 0.85 | 1.12 | 1.31 | 1.56 | 1.31 | 1.81 | 1.75 | 1.88 | 4.00 | 3.75 | S | 3.62 | 2.12 | 1.75 |
| 15 | 1.18 | 1.18 | 1.25 | 0.94 | 1.25 | 1.62 | 1.34 | 0.75 | 0 75 | 1.09 | 1.06 | 1.62 | S | 1.69 | 1.75 | 2.00 | 4.00 | S | 1.12 | 3.06‖ | 2.38 | 1.50 |
| 16 | 1.22 | 1.34 | 1.28 | 0.90 | 1.44 | 1.68 | 1.34 | 0.75 | 0.56 | 1.31 | 0.94 | S | 1.62 | 1.56 | 1.75 | 1.88 | 3.75 | 3.50 | 1.12 | 3.00‖ | 2.50 | 1.50 |
| 17 | 1.23 | 1.09 | 1.25 | 0.94 | 1.31 | 1.75 | 1.34 | 0.81 | 0.42 | 1.50 | S | 1.56 | 1.88 | 1.38 | 1.75 | 1.88 | S | 3.75 | 1.12 | 2.81‖ | 1.88 | S |
| 18 | 1.21 | 1.00 | 1.28 | 0.94 | 1.25 | 1.88 | 1.31 | 0.65 | 0.32 | S | 0.94 | 1.56 | 1.88 | 1.69 | 1.75 | S | 3.25 | 3.75 | 1.38 | 3.19‖ | 1.25 | 1.25 |
| 19 | 1.14 | 0.75 | 1.28 | 0.94 | 1.19 | 1.88 | 1.19 | 0.50 | 0.29 | 1.38 | 0.94 | 1.50 | 2.12 | 1.69 | S | 1.88 | 2.75 | 3.25 | 1.25 | 3.31‖ | S | 1.50 |
| 20 | 1.06 | 0.75 | S | 0.94 | 1.12 | 1.56 | 1.06 | 0.62 | S | 1.31 | 0.94 | 1.50 | 2.12 | S | 1.75 | 1.88 | 2.88 | 2.69 | 1.25 | S | 1.50 | 1.38 |
| 21 | 0.98 | S | 1.25 | 0.78 | 1.25 | 1.31† | 0.94 | 0.64 | 0.29 | 1.31 | 0.94 | 1.50 | 2.12 | 1.75 | 1.75 | 2.25 | 3.12 | 2.56 | S | 3.44‖ | 2.00 | 0.91‖ |
| 22 | 0.96 | 0.75 | 1.00 | 0.78 | 1.25 | 1.25† | 0.88 | 0.66 | 0.44 | 1.31 | 1.00 | 1.50 | S | 1.88 | 1.75 | 2 25 | 3.25 | S | | 4.19‖ | 1.62 | 1.10‖ |
| 23 | 0.96 | 0.81 | 1.00 | 0.78 | 1.25 | 1.25† | 0.81 | 0.69 | 0.44 | 1.44 | 1.06 | S | 1.69 | 1.81 | 1.75 | 2.25 | 3.25 | 2.56 | | 4.06‖ | 1.75 | 1.38‖ |
| 24 | 1.01 | 0.81 | 0.85 | 0.97 | 1.25 | 1.25† | 0.88 | 0.69 | 0.44 | 1.44 | S | 1.50 | 1.69 | 1.62 | 1.75 | 2.25 | S | 2 25 | | 4.06‖ | 1.38 | S |
| 25 | 1.02 | 0.81 | 0.91 | 0.97 | 1.25 | 1.25† | 0.88 | 0.75 | 0.36 | S | 1.12 | | | 1.62 | 1.75 | S | 3.25 | 1.88 | | 4.06‖ | 1.38 | 1.50‖ |
| 26 | 1.00 | 1.06 | 0.69 | 0.81 | 1.25 | 1.25† | 0.81 | 0.88 | 0.36 | 1.44 | 1.25 | | 1.56 | 1.50 | S | 2.25 | | 1.50 | | 3.62‖ | S | 1.44‖ |
| 27 | 0.97 | 1.19 | S | 0.65 | 1.25 | 1.25† | 0.81 | 0.88 | S | 1.44 | 1.12† | | 1.56 | S | 1.75 | 1 88 | | 1.50 | | S | 1.38 | 1.44‖ |
| 28 | 0.99 | S | 0.58 | 0.81 | 1.19 | 1.25† | 0.81 | 0.88 | 0.41 | 1.50 | 1.00† | | 1.56 | 1.50 | 1.75 | 1.88 | | 1.88 | S | 3.19‖ | 1.62 | |
| 29 | 0.96 | 1.19 | 0.58 | 0.81 | 1.06 | 1.25† | 0.81 | 0.88 | 0.65 | 1.31 | 1.00† | | S | 1.50 | | 1.88 | | S | | 2.62‖ | 1.25 | |
| 30 | 0.97 | 1.19 | 0.58 | 0.81 | 1.00 | 1.25† | 0.81 | 1.00 | 0.65 | 1.25 | 1.00† | S | 1.80 | 1.31 | | 1.88 | | 1.88 | | 2.25‖ | 1.12 | 1.44‖ |

| | | |